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\* \* \* \* \* Welcome to STN International \* \* \* \* \*

NEWS 1 Web Page for STN Seminar Schedule - N. America  
NEWS 2 JUL 02 LMEDLINE coverage updated  
NEWS 3 JUL 02 SCISEARCH enhanced with complete author names  
NEWS 4 JUL 02 CHEMCATS accession numbers revised  
NEWS 5 JUL 02 CA/Capplus enhanced with utility model patents from China  
NEWS 6 JUL 16 Capplus enhanced with French and German abstracts  
NEWS 7 JUL 18 CA/Capplus patent coverage enhanced  
NEWS 8 JUL 26 USPATFULL/USPAT2 enhanced with IPC reclassification  
NEWS 9 JUL 30 USGENE now available on STN  
NEWS 10 AUG 06 CAS REGISTRY enhanced with new experimental property tags  
NEWS 11 AUG 06 FSTA enhanced with new thesaurus edition  
NEWS 12 AUG 13 CA/Capplus enhanced with additional kind codes for granted patents  
NEWS 13 AUG 20 CA/Capplus enhanced with CAS indexing in pre-1907 records  
NEWS 14 AUG 27 Full-text patent databases enhanced with predefined patent family display formats from INPADOCDB  
NEWS 15 AUG 27 USPATOLD now available on STN  
NEWS 16 AUG 28 CAS REGISTRY enhanced with additional experimental spectral property data  
NEWS 17 SEP 07 STN AnaVist, Version 2.0, now available with Derwent World Patents Index  
NEWS 18 SEP 13 FORIS renamed to SOFIS  
NEWS 19 SEP 13 INPADOCDB enhanced with monthly SDI frequency  
NEWS 20 SEP 17 CA/Capplus enhanced with printed CA page images from 1967-1998  
NEWS 21 SEP 17 Capplus coverage extended to include traditional medicine patents  
NEWS 22 SEP 24 EMBASE, EMBAL, and LEMBASE reloaded with enhancements  
NEWS 23 OCT 02 CA/Capplus enhanced with pre-1907 records from Chemisches Zentralblatt  
NEWS 24 OCT 19 BEILSTEIN updated with new compounds  
  
NEWS EXPRESS 19 SEPTEMBER 2007: CURRENT WINDOWS VERSION IS V8.2, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 19 SEPTEMBER 2007.  
  
NEWS HOURS STN Operating Hours Plus Help Desk Availability  
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NEWS IPC8 For general information regarding STN implementation of IPC 8

Enter NEWS followed by the item number or name to see news on that specific topic.

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\* \* \* \* \* STN Columbus \* \* \* \* \*

FILE 'HOME' ENTERED AT 16:12:02 ON 05 NOV 2007

=>

=> file registry

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.21

0.21

FILE 'REGISTRY' ENTERED AT 16:12:14 ON 05 NOV 2007

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STRUCTURE FILE UPDATES: 4 NOV 2007 HIGHEST RN 952404-20-5

DICTIONARY FILE UPDATES: 4 NOV 2007 HIGHEST RN 952404-20-5

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH June 29, 2007

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<http://www.cas.org/support/stngen/stndoc/properties.html>

=> file stnguide

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

2.25

2.46

FILE 'STNGUIDE' ENTERED AT 16:15:05 ON 05 NOV 2007

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=>

Uploading

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Switching to the Registry File...

Some commands only work in certain files. For example, the EXPAND command can only be used to look at the index in a file which has an index. Enter "HELP COMMANDS" at an arrow prompt (=>) for a list of commands which can be used in this file.

=> FILE REGISTRY

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	1.92	4.38

FILE 'REGISTRY' ENTERED AT 16:34:34 ON 05 NOV 2007  
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STRUCTURE FILE UPDATES: 4 NOV 2007 HIGHEST RN 952404-20-5  
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TSCA INFORMATION NOW CURRENT THROUGH June 29, 2007

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

=>

Uploading C:\Program Files\Stnexp\Queries\11759704.str

L1 STRUCTURE UPLOADED

=> d l1

L1 HAS NO ANSWERS

L1 STR

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

Structure attributes must be viewed using STN Express query preparation.

=> s l1

SAMPLE SEARCH INITIATED 16:35:06 FILE 'REGISTRY'  
SAMPLE SCREEN SEARCH COMPLETED - 3547 TO ITERATE

56.4% PROCESSED 2000 ITERATIONS 1 ANSWERS  
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)  
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*

BATCH \*\*COMPLETE\*\*  
PROJECTED ITERATIONS: 67368 TO 74512  
PROJECTED ANSWERS: 1 TO 114

L2 1 SEA SSS SAM L1

=> s l1 ful  
FULL SEARCH INITIATED 16:35:10 FILE 'REGISTRY'  
FULL SCREEN SEARCH COMPLETED - 70912 TO ITERATE

100.0% PROCESSED 70912 ITERATIONS 93 ANSWERS  
SEARCH TIME: 00.00.01

L3 93 SEA SSS FUL L1

=> file caplus  
COST IN U.S. DOLLARS SINCE FILE TOTAL  
ENTRY SESSION  
FULL ESTIMATED COST 172.10 176.48

FILE 'CAPLUS' ENTERED AT 16:35:13 ON 05 NOV 2007  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
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FILE COVERS 1907 - 5 Nov 2007 VOL 147 ISS 20  
FILE LAST UPDATED: 4 Nov 2007 (20071104/ED)

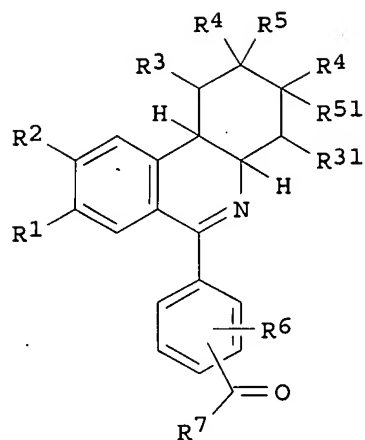
Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

<http://www.cas.org/infopolicy.html>

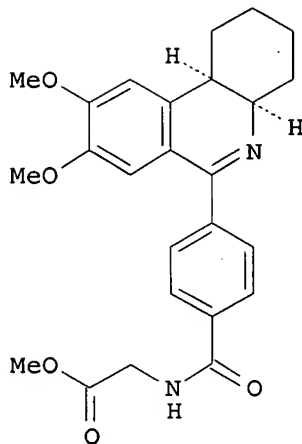
=> s l3  
L4 7 L3

=> d abs fbib hitstr 1-7

L4 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2007 ACS on STN  
GI



I



II

AB Title compds. I [wherein R1, R2 = independently OH, (cyclo)alkoxy or (fluoro)alkoxy; R3, R31 = H or alkyl; R4 = H or alkyl; R5 = R51 = H; R6 = H, halo, alkyl or alkoxy; R7 = (un)substituted NH2; or their salts and the N-oxides, and the salts of the N-oxides thereof] were prepared, such as II, as PDE4 inhibitors. Selected prepared I showed inhibition of PDE4 with pIC50 values of 7.36 - 9.33. Therefore, I and pharmaceutical compns. thereof are useful for treating PDE-mediated disorders, such as respiratory diseases.

AN 2006:945476 CAPLUS

DN 145:335953

TI Preparation of amido-substituted 6-phenylphenanthridines as PDE4 inhibitors

IN Kautz, Ulrich; Schmidt, Beate; Flockerzi, Dieter; Chiesa, Maria Vittoria; Hatzelmann, Armin; Zitt, Christof; Barsig, Johannes; Marx, Degenhard; Kley, Hans-Peter

PA Altana Pharma AG, Germany

SO PCT Int. Appl., 68pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006095009	A1	20060914	WO 2006-EP60595	20060309
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				

EP 2005-101820

A 20050309

OS MARPAT 145:335953

IT 909778-53-6P 909778-57-0P 909778-59-2P

909778-61-6P 909778-63-8P 909778-69-4P

909778-70-7P 909778-71-8P 909778-72-9P  
 909778-73-0P 909778-74-1P 909778-75-2P  
 909778-76-3P 909778-77-4P 909778-79-6P  
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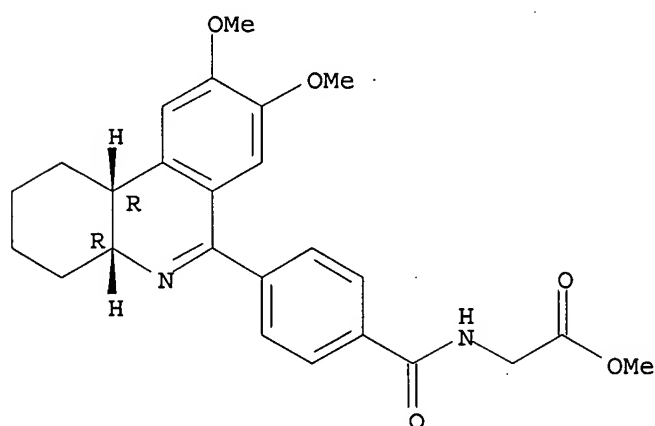
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of amido-substituted 6-phenylphenanthridines as PDE4 inhibitors)

RN 909778-53-6 CAPLUS

CN Glycine, N- [4- [(4aR,10bR)-1,2,3,4,4a,10b-hexahydro-8,9-dimethoxy-6-phenanthridinyl]benzoyl]-, methyl ester (CA INDEX NAME)

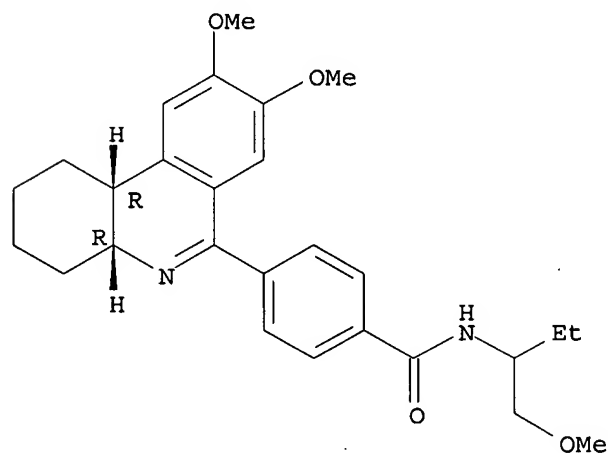
Absolute stereochemistry.



RN 909778-57-0 CAPLUS

CN Benzamide, 4- [(4aR,10bR)-1,2,3,4,4a,10b-hexahydro-8,9-dimethoxy-6-phenanthridinyl]-N- [1-(methoxymethyl)propyl]- (CA INDEX NAME)

Absolute stereochemistry.

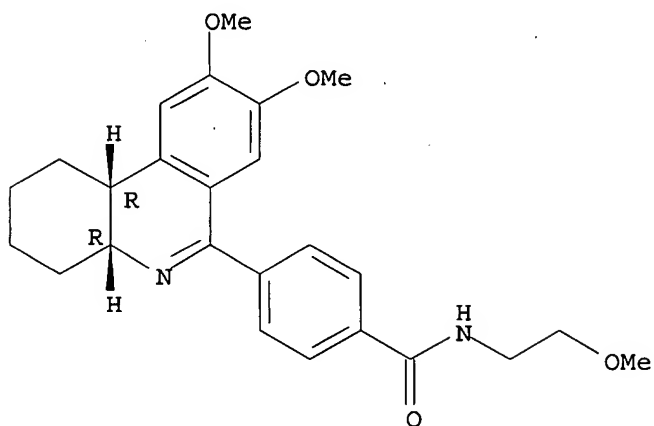


RN 909778-59-2 CAPLUS

CN Benzamide, 4- [(4aR,10bR)-1,2,3,4,4a,10b-hexahydro-8,9-dimethoxy-6-

phenanthridinyl]-N-(2-methoxyethyl)- (CA INDEX NAME)

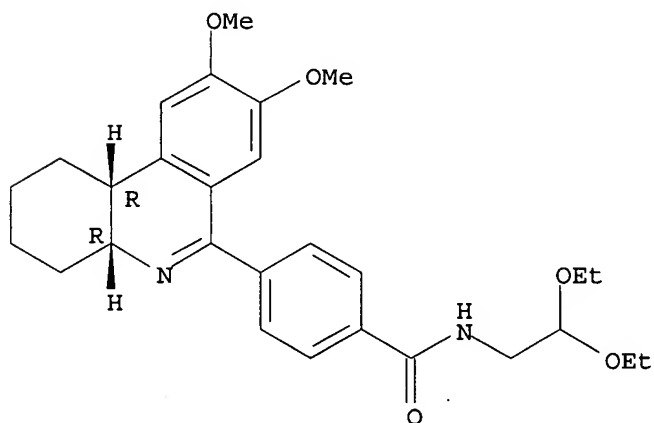
Absolute stereochemistry.



RN 909778-61-6 CAPLUS

CN Benzamide, N-(2,2-diethoxyethyl)-4-[(4aR,10bR)-1,2,3,4,4a,10b-hexahydro-8,9-dimethoxy-6-phenanthridinyl]- (CA INDEX NAME)

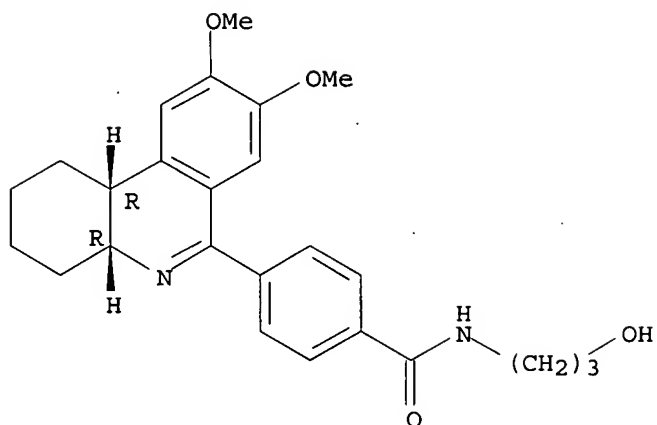
Absolute stereochemistry.



RN 909778-63-8 CAPLUS

CN Benzamide, 4-[(4aR,10bR)-1,2,3,4,4a,10b-hexahydro-8,9-dimethoxy-6-phenanthridinyl]-N-(3-hydroxypropyl)- (CA INDEX NAME)

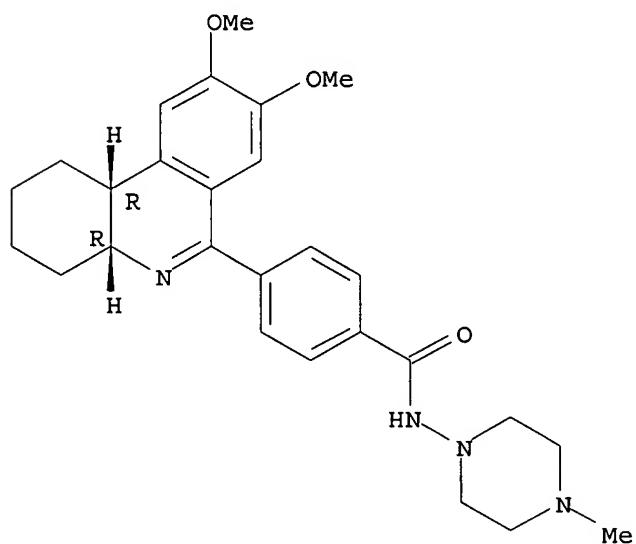
Absolute stereochemistry.



RN 909778-69-4 CAPLUS

CN Benzamide, 4-[(4aR,10bR)-1,2,3,4,4a,10b-hexahydro-8,9-dimethoxy-6-phenanthridinyl]-N-(4-methyl-1-piperazinyl)- (CA INDEX NAME)

Absolute stereochemistry.

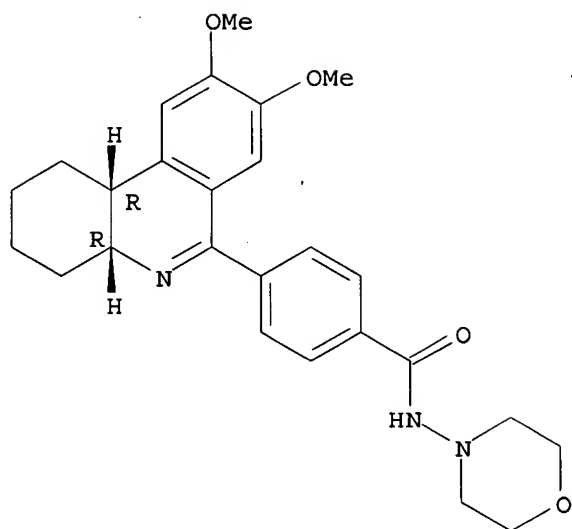


RN 909778-70-7 CAPLUS

CN Benzamide, 4-[(4aR,10bR)-1,2,3,4,4a,10b-hexahydro-8,9-dimethoxy-6-phenanthridinyl]-N-morpholinyl- (CA INDEX NAME)

Absolute stereochemistry.

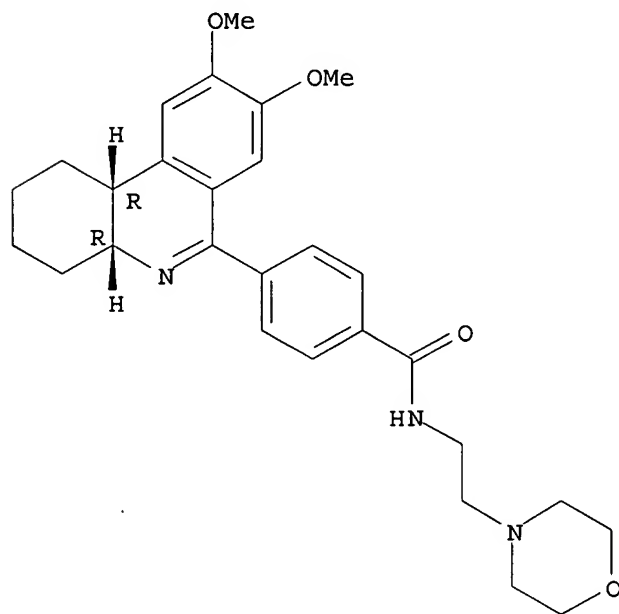




RN 909778-71-8 CAPLUS

CN Benzamide, 4-[(4aR,10bR)-1,2,3,4,4a,10b-hexahydro-8,9-dimethoxy-6-phenanthridinyl]-N-[2-(4-morpholinyl)ethyl]- (CA INDEX NAME)

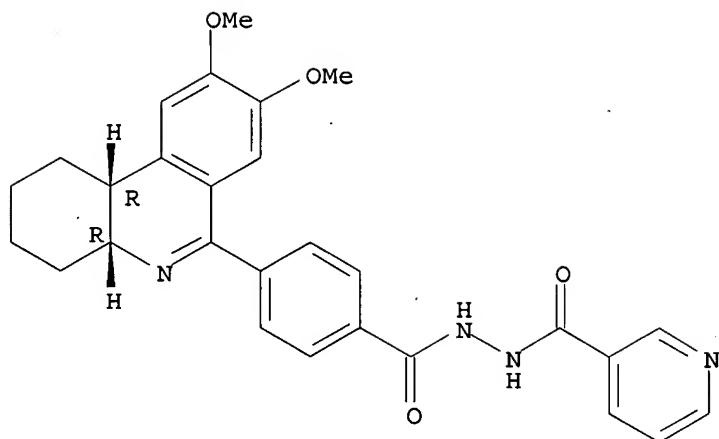
Absolute stereochemistry.



RN 909778-72-9 CAPLUS

CN 3-Pyridinecarboxylic acid, 2-[4-[(4aR,10bR)-1,2,3,4,4a,10b-hexahydro-8,9-dimethoxy-6-phenanthridinyl]benzoyl]hydrazide (CA INDEX NAME)

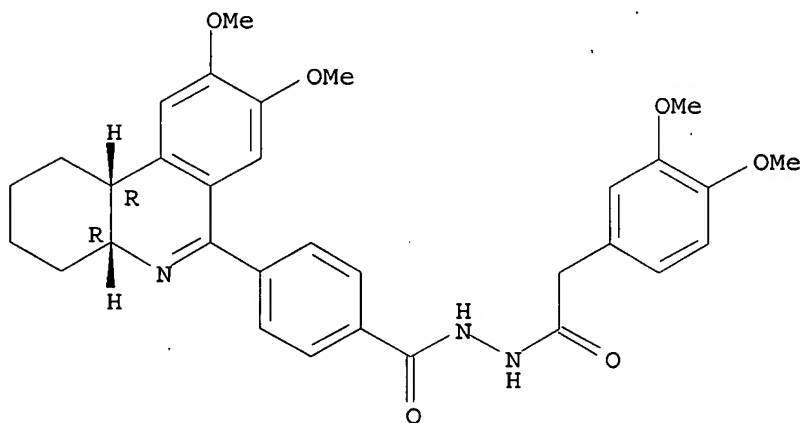
Absolute stereochemistry.



RN 909778-73-0 CAPLUS

CN Benzeneacetic acid, 3,4-dimethoxy-, 2-[4-[(4aR,10bR)-1,2,3,4,4a,10b-hexahydro-8,9-dimethoxy-6-phenanthridinyl]benzoyl]hydrazide (CA INDEX NAME)

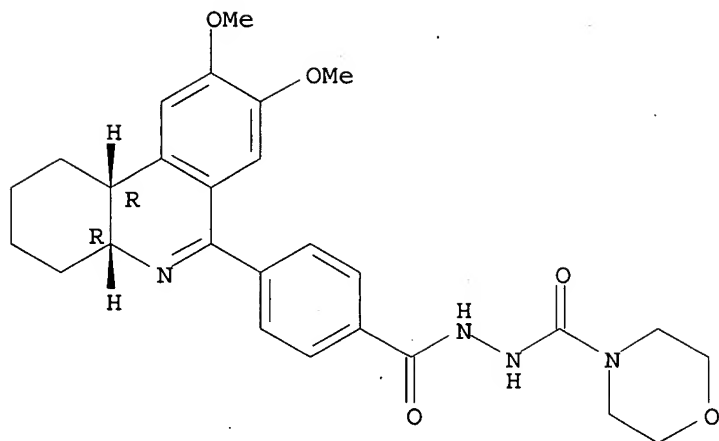
Absolute stereochemistry.



RN 909778-74-1 CAPLUS

CN 4-Morpholinecarboxylic acid, 2-[4-[(4aR,10bR)-1,2,3,4,4a,10b-hexahydro-8,9-dimethoxy-6-phenanthridinyl]benzoyl]hydrazide (CA INDEX NAME)

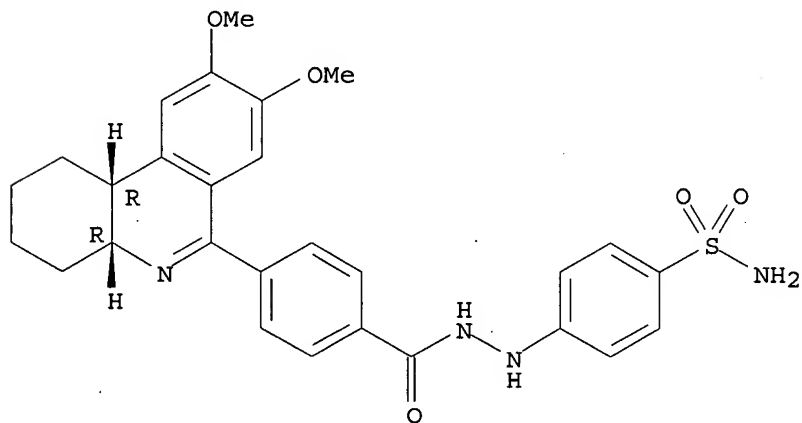
Absolute stereochemistry.



RN 909778-75-2 CAPLUS

CN Benzoic acid, 4-[(4aR,10bR)-1,2,3,4,4a,10b-hexahydro-8,9-dimethoxy-6-phenanthridinyl]-, 2-[4-(aminosulfonyl)phenyl]hydrazide (CA INDEX NAME)

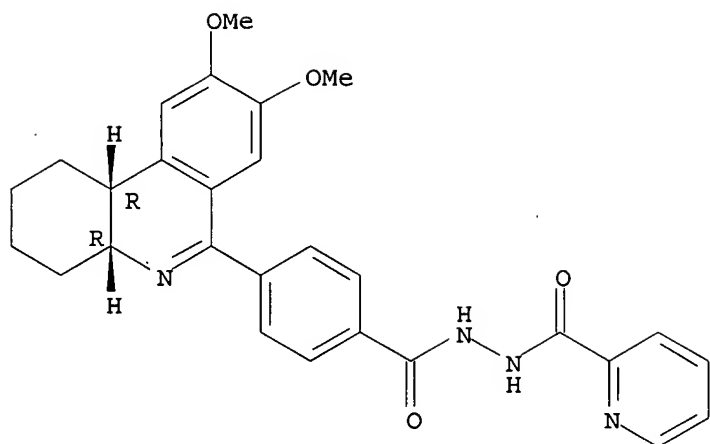
Absolute stereochemistry.



RN 909778-76-3 CAPLUS

CN 2-Pyridinecarboxylic acid, 2-[4-[(4aR,10bR)-1,2,3,4,4a,10b-hexahydro-8,9-dimethoxy-6-phenanthridinyl]benzoyl]hydrazide (CA INDEX NAME)

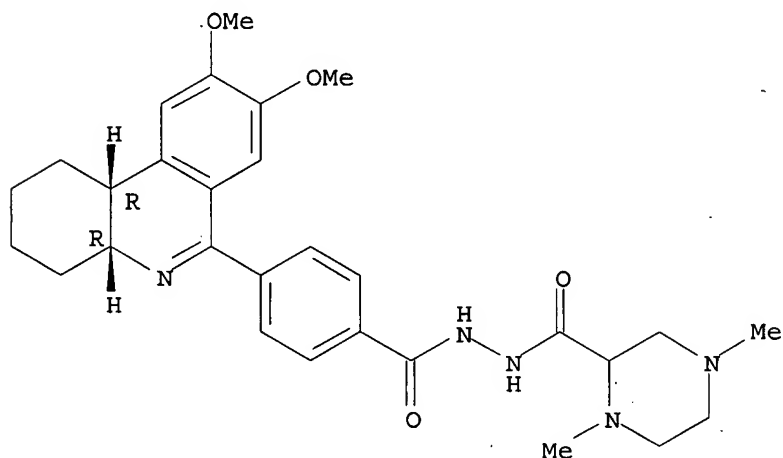
Absolute stereochemistry.



RN 909778-77-4 CAPLUS

CN 2-Piperazinecarboxylic acid, 1,4-dimethyl-, 2-[4-[(4aR,10bR)-1,2,3,4,4a,10b-hexahydro-8,9-dimethoxy-6-phenanthridinyl]benzoyl]hydrazide  
(CA INDEX NAME)

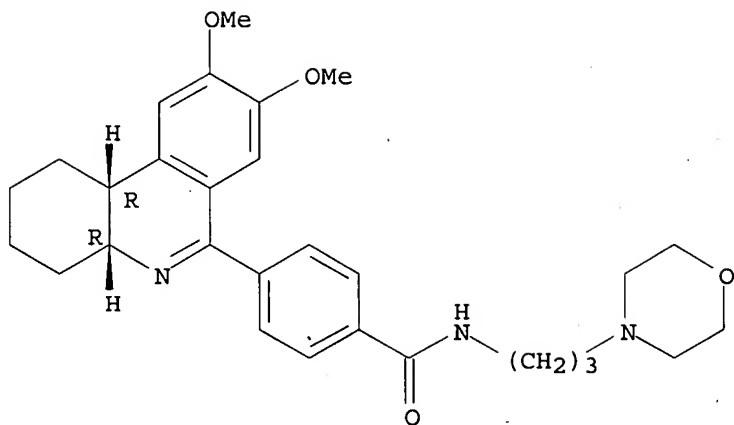
Absolute stereochemistry.



RN 909778-79-6 CAPLUS

CN Benzamide, 4-[(4aR,10bR)-1,2,3,4,4a,10b-hexahydro-8,9-dimethoxy-6-phenanthridinyl]-N-[3-(4-morpholinyl)propyl]- (CA INDEX NAME)

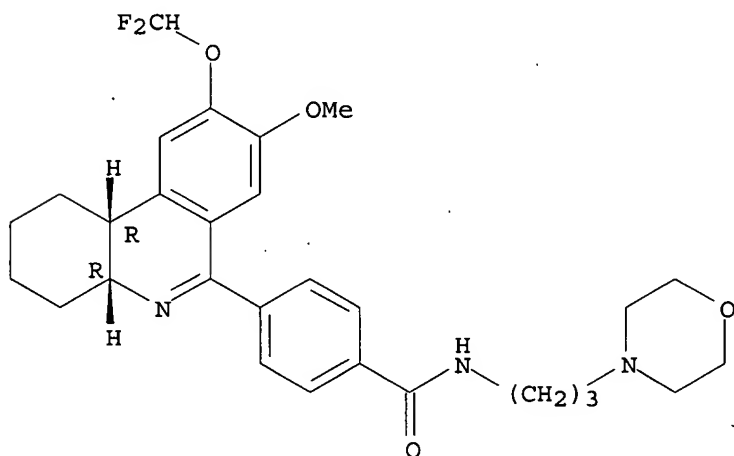
Absolute stereochemistry.



RN 909778-82-1 CAPLUS

CN Benzamide, 4-[(4aR,10bR)-9-(difluoromethoxy)-1,2,3,4,4a,10b-hexahydro-8-methoxy-6-phenanthridinyl]-N-[3-(4-morpholinyl)propyl]- (CA INDEX NAME)

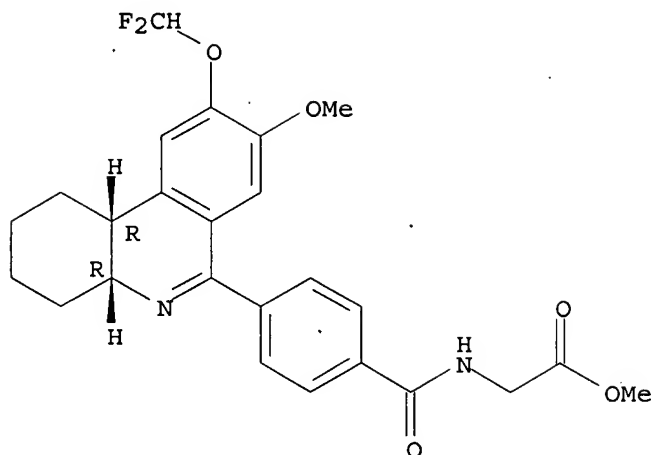
Absolute stereochemistry.



RN 909778-83-2 CAPLUS

CN Glycine, N-[4-[(4aR,10bR)-9-(difluoromethoxy)-1,2,3,4,4a,10b-hexahydro-8-methoxy-6-phenanthridinyl]benzoyl]-, methyl ester (CA INDEX NAME)

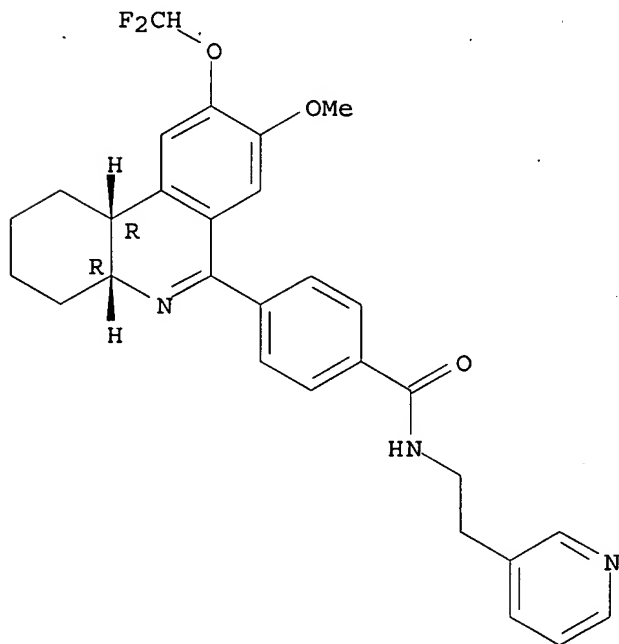
Absolute stereochemistry.



RN 909778-85-4 CAPLUS

CN Benzamide, 4-[(4aR,10bR)-9-(difluoromethoxy)-1,2,3,4,4a,10b-hexahydro-8-methoxy-6-phenanthridinyl]-N-[2-(3-pyridinyl)ethyl]- (CA INDEX NAME)

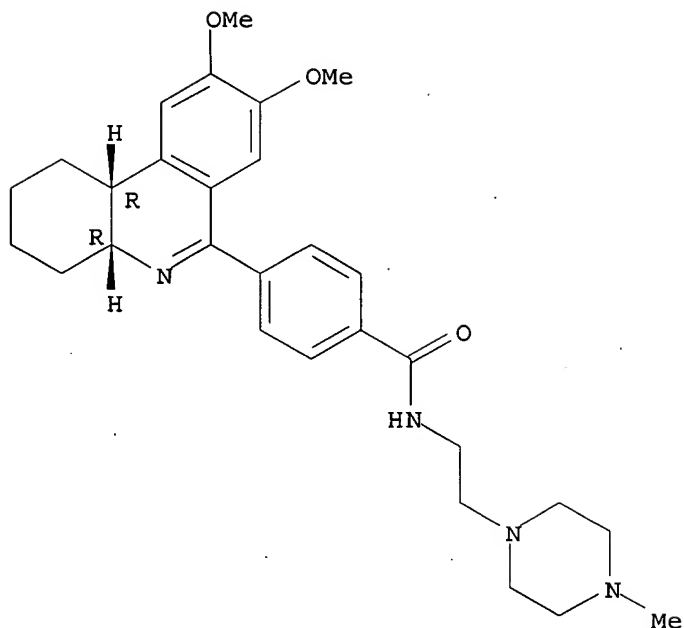
Absolute stereochemistry.



RN 909778-90-1 CAPLUS

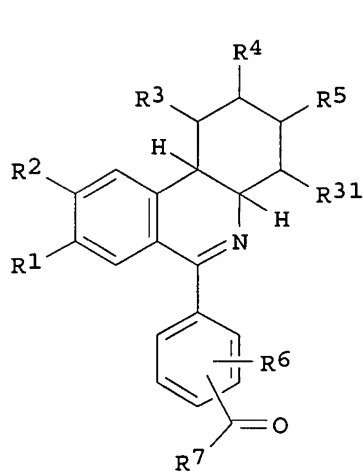
CN Benzamide, 4-[(4aR,10bR)-1,2,3,4,4a,10b-hexahydro-8,9-dimethoxy-6-phenanthridinyl]-N-[2-(4-methyl-1-piperazinyl)ethyl]- (CA INDEX NAME)

Absolute stereochemistry.

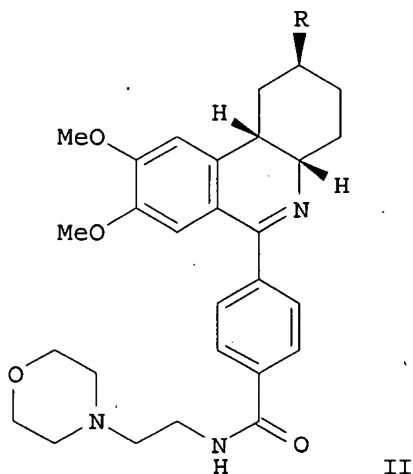


RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2007 ACS on STN  
GI



I



II

AB Title compds. I [wherein R1, R2 = OH or (cyclo)alkoxy; R3, R31 = H or alkyl; R4 = OH, alkoxy or alkylcarbonyloxy; R5 = H or alkyl; R6 = H, halo, alkyl or alkoxy; R7 = (un)substituted NH2; etc., or their salts and the N-oxides, and the salts of the N-oxides] were prepared as PDE4 inhibitors. For instance, II (R = OH) was synthesized by hydrolysis of its ester II (R = OAc) with Cs2CO3 in methanol. Representative I, including II (R = OH), were found to inhibit PDE4B2 with pIC50 values of 6.42 - 9.02. Therefore, I and pharmaceutical compns. thereof are useful for treating PDE-mediated

disorders, such as respiratory diseases.

AN 2005:1026938 CAPLUS  
 DN 143:326233  
 TI Preparation of amido-substituted phenylphenanthridines as PDE4 inhibitors  
 for the treatment of respiratory diseases  
 IN Schmidt, Beate; Kautz, Ulrich  
 PA Altana Pharma A.-G., Germany  
 SO PCT Int. Appl., 107 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005087745	A1	20050922	WO 2005-EP51054	20050309
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	RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
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	CN 1926113	A	20070307	CN 2005-80006855	20050309
				EP 2004-100990	A 20040310
				EP 2004-106677	A 20041217
				WO 2005-EP51054	W 20050309
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				EP 2004-106677	A 20041217
				WO 2005-EP51054	W 20050309



NO 2006004415	A	20061010	NO 2006-4415	20060929
			EP 2004-100990	A 20040310
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OS MARPAT 143:326233

IT 865306-83-8P 865306-84-9P 865306-86-1P  
 865306-87-2P 865306-88-3P 865306-90-7P  
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 865306-98-5P 865306-99-6P 865307-00-2P  
 865307-01-3P 865307-08-0P 865307-09-1P  
 865307-10-4P 865307-11-5P 865307-13-7P  
 865307-15-9P 865307-16-0P 865307-33-1P  
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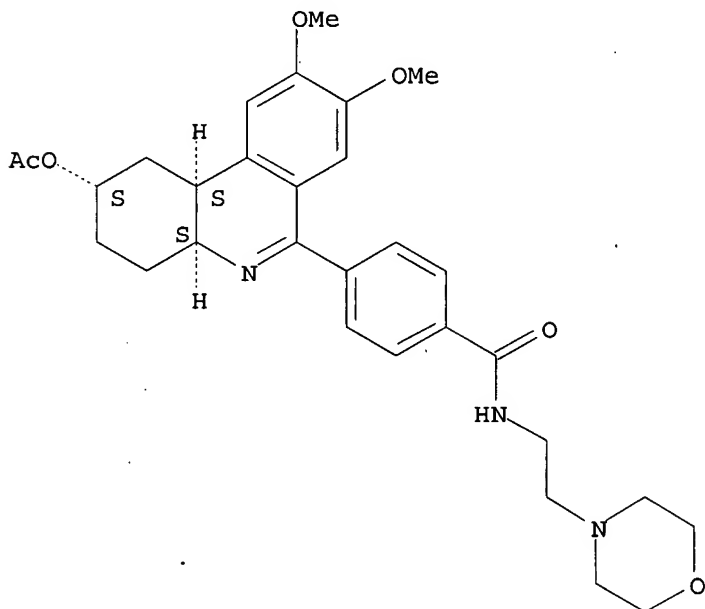
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(inhibitor; preparation of amido-substituted phenylphenanthridines as PDE4 inhibitors for the treatment of respiratory diseases)

RN 865306-83-8 CAPLUS

CN Benzamide, 4-[(2R,4aR,10bR)-2-(acetyloxy)-1,2,3,4,4a,10b-hexahydro-8,9-dimethoxy-6-phenanthridinyl]-N-[2-(4-morpholinyl)ethyl]-, rel- (CA INDEX NAME)

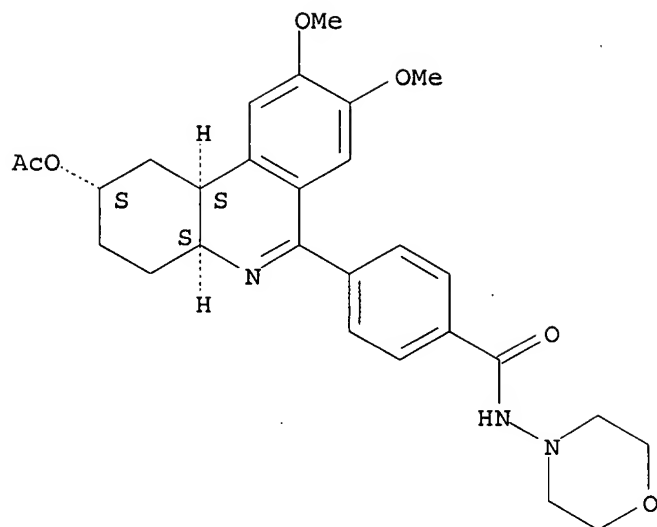
Relative stereochemistry.



RN 865306-84-9 CAPLUS

CN Benzamide, 4-[(2R,4aR,10bR)-2-(acetyloxy)-1,2,3,4,4a,10b-hexahydro-8,9-dimethoxy-6-phenanthridinyl]-N-4-morpholinyl-, rel- (CA INDEX NAME)

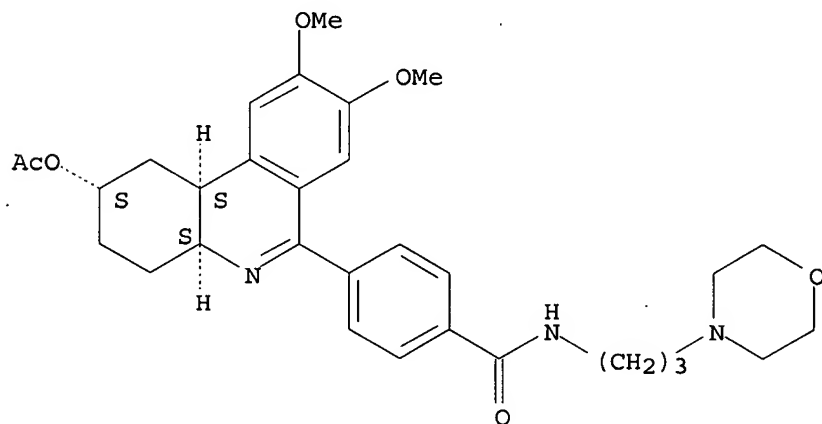
Relative stereochemistry.



RN 865306-86-1 CAPLUS

CN Benzamide, 4-[(2R,4aR,10bR)-2-(acetyloxy)-1,2,3,4,4a,10b-hexahydro-8,9-dimethoxy-6-phenanthridinyl]-N-[3-(4-morpholinyl)propyl]-, rel- (CA INDEX NAME)

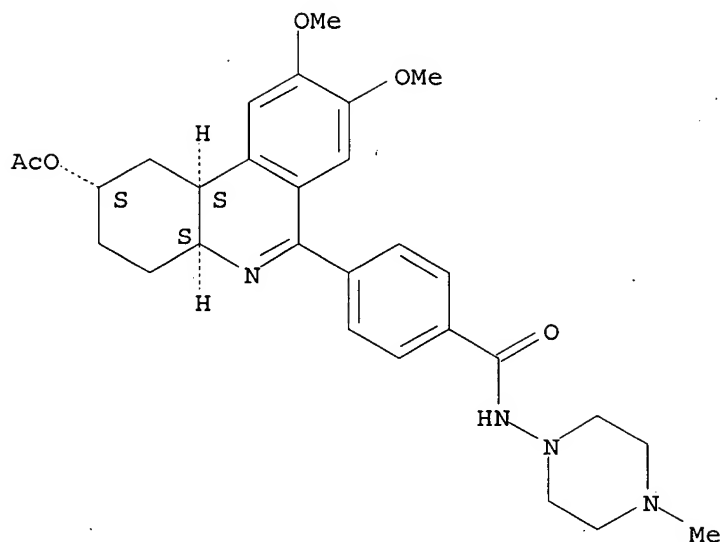
Relative stereochemistry.



RN 865306-87-2 CAPLUS

CN Benzamide, 4-[(2R,4aR,10bR)-2-(acetyloxy)-1,2,3,4,4a,10b-hexahydro-8,9-dimethoxy-6-phenanthridinyl]-N-(4-methyl-1-piperazinyl)-, rel- (CA INDEX NAME)

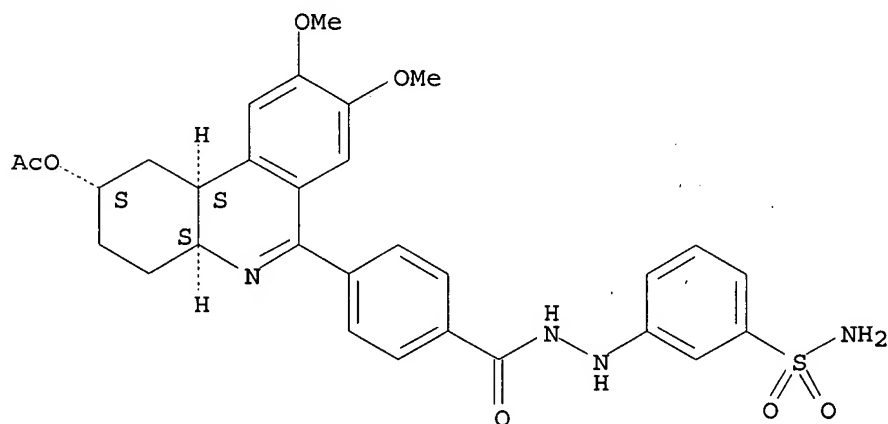
Relative stereochemistry.



RN 865306-88-3 CAPLUS

CN Benzoic acid, 4-[(2R,4aR,10bR)-2-(acetyloxy)-1,2,3,4,4a,10b-hexahydro-8,9-dimethoxy-6-phenanthridinyl]-, 2-[3-(aminosulfonyl)phenyl]hydrazide, rel- (CA INDEX NAME)

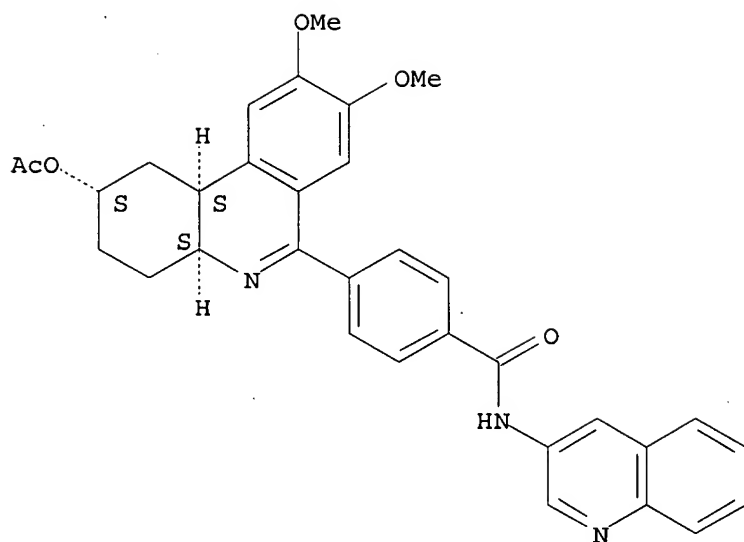
Relative stereochemistry.



RN 865306-90-7 CAPLUS

CN Benzamide, 4-[(2R,4aR,10bR)-2-(acetyloxy)-1,2,3,4,4a,10b-hexahydro-8,9-dimethoxy-6-phenanthridinyl]-N-3-quinolinyl-, rel- (CA INDEX NAME)

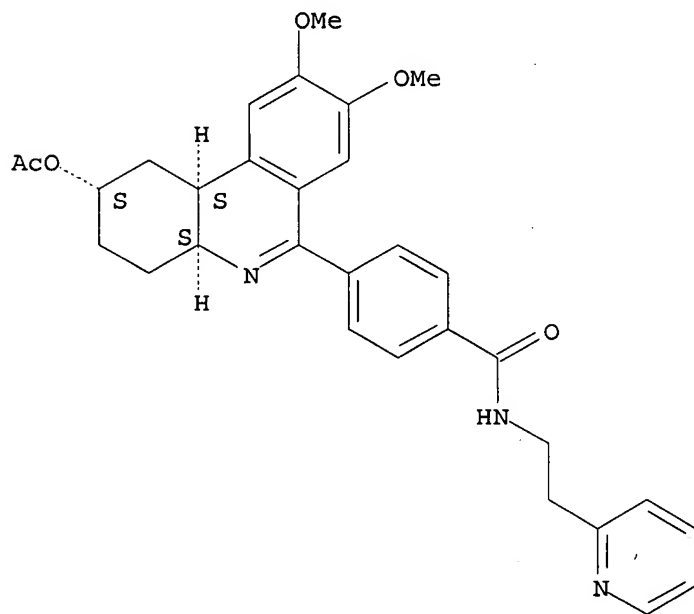
Relative stereochemistry.



RN 865306-91-8 CAPLUS

CN Benzamide, 4-[(2R,4aR,10bR)-2-(acetyloxy)-1,2,3,4,4a,10b-hexahydro-8,9-dimethoxy-6-phenanthridinyl]-N-[2-(2-pyridinyl)ethyl]-, rel- (CA INDEX NAME)

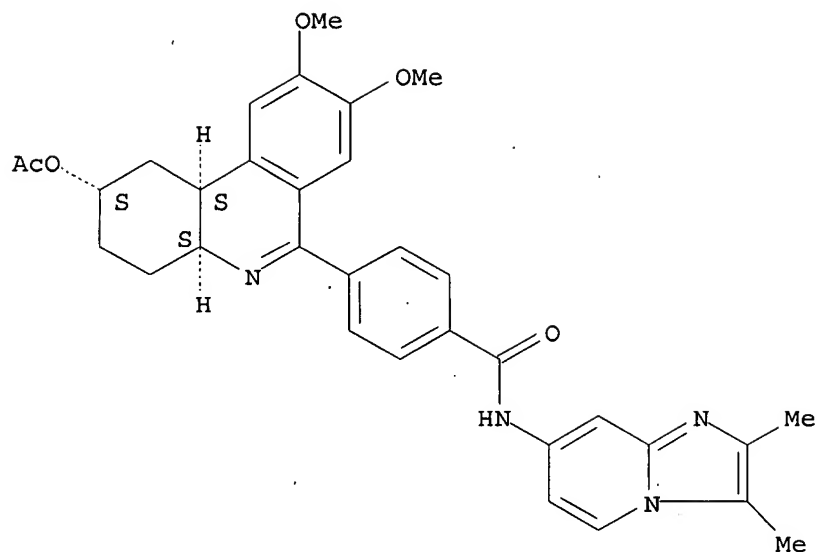
Relative stereochemistry.



RN 865306-93-0 CAPLUS

CN Benzamide, 4-[(2R,4aR,10bR)-2-(acetyloxy)-1,2,3,4,4a,10b-hexahydro-8,9-dimethoxy-6-phenanthridinyl]-N-(2,3-dimethylimidazo[1,2-a]pyridin-7-yl)-, rel- (CA INDEX NAME)

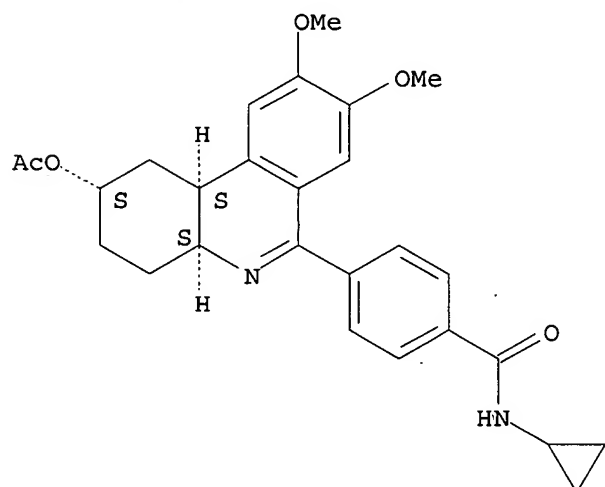
Relative stereochemistry.



RN 865306-95-2 CAPLUS

CN Benzamide, 4-[(2R,4aR,10bR)-2-(acetyloxy)-1,2,3,4,4a,10b-hexahydro-8,9-dimethoxy-6-phenanthridinyl]-N-cyclopropyl-, rel- (CA INDEX NAME)

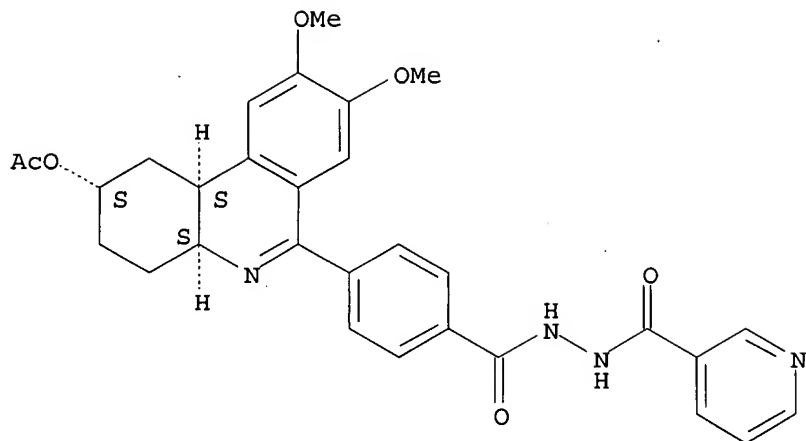
Relative stereochemistry.



RN 865306-98-5 CAPLUS

CN 3-Pyridinecarboxylic acid, 2-[4-[(2R,4aR,10bR)-2-(acetyloxy)-1,2,3,4,4a,10b-hexahydro-8,9-dimethoxy-6-phenanthridinyl]benzoyl]hydrazide, rel- (CA INDEX NAME)

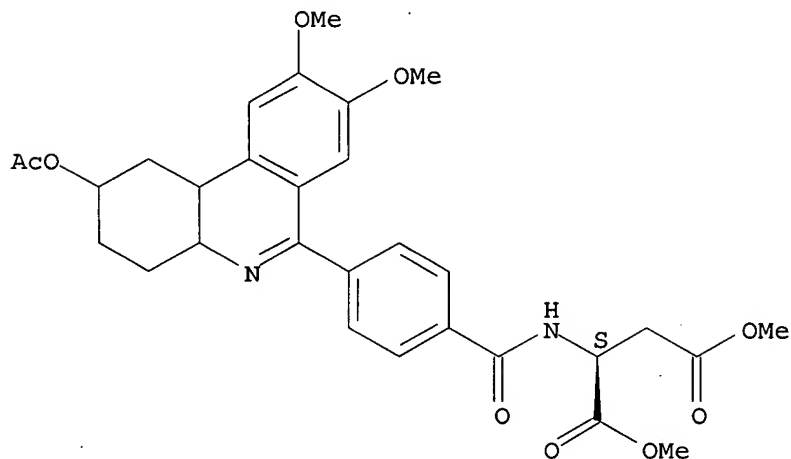
Relative stereochemistry.



RN 865306-99-6 CAPLUS

CN L-Aspartic acid, N-[4-[2-(acetyloxy)-1,2,3,4,4a,10b-hexahydro-8,9-dimethoxy-6-phenanthridinyl]benzoyl]-, dimethyl ester (9CI) (CA INDEX NAME)

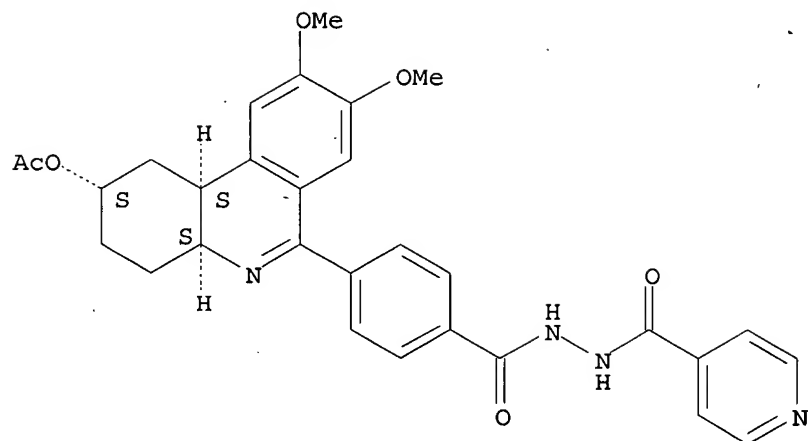
Absolute stereochemistry.



RN 865307-00-2 CAPLUS

CN 4-Pyridinecarboxylic acid, 2-[4-[(2R,4aR,10bR)-2-(acetyloxy)-1,2,3,4,4a,10b-hexahydro-8,9-dimethoxy-6-phenanthridinyl]benzoyl]hydrazide, rel- (CA INDEX NAME)

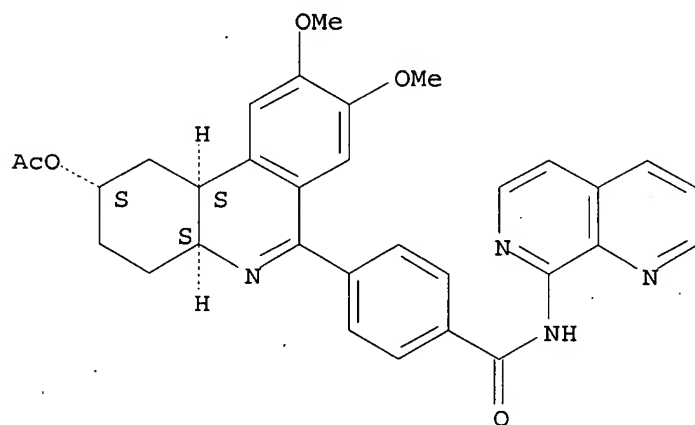
Relative stereochemistry.



RN 865307-01-3 CAPLUS

CN Benzamide, 4-[(2R,4aR,10bR)-2-(acetyloxy)-1,2,3,4,4a,10b-hexahydro-8,9-dimethoxy-6-phenanthridinyl]-N-1,7-naphthyridin-8-yl-, rel- (CA INDEX NAME)

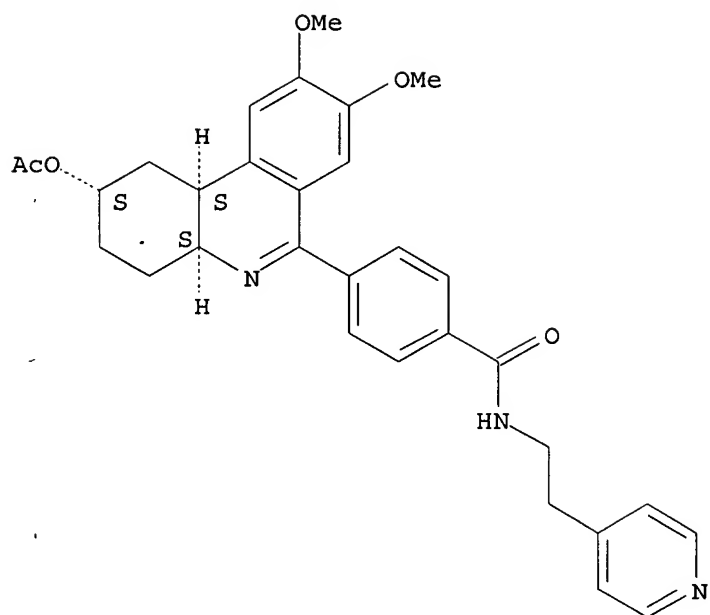
Relative stereochemistry.



RN 865307-08-0 CAPLUS

CN Benzamide, 4-[(2R,4aR,10bR)-2-(acetyloxy)-1,2,3,4,4a,10b-hexahydro-8,9-dimethoxy-6-phenanthridinyl]-N-[2-(4-pyridinyl)ethyl]-, rel- (CA INDEX NAME)

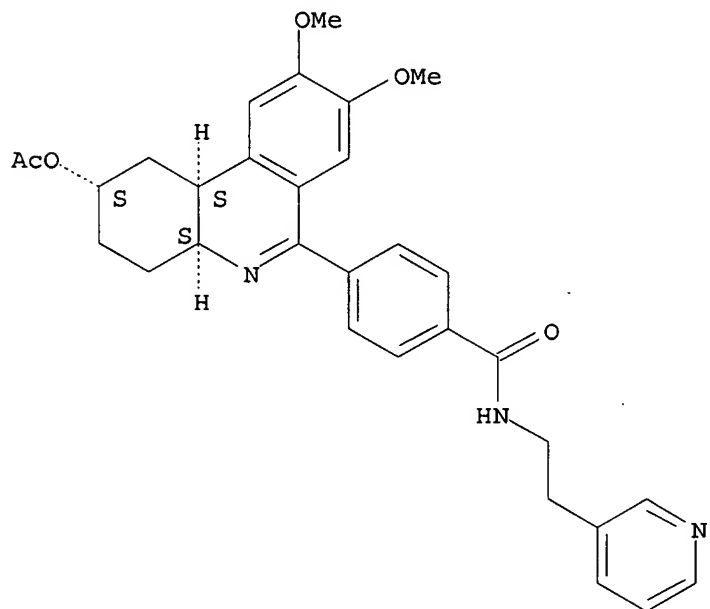
Relative stereochemistry.



RN 865307-09-1 CAPLUS

CN Benzamide, 4-[(2R,4aR,10bR)-2-(acetyloxy)-1,2,3,4,4a,10b-hexahydro-8,9-dimethoxy-6-phenanthridinyl]-N-[2-(3-pyridinyl)ethyl]-, rel- (CA INDEX NAME)

Relative stereochemistry.



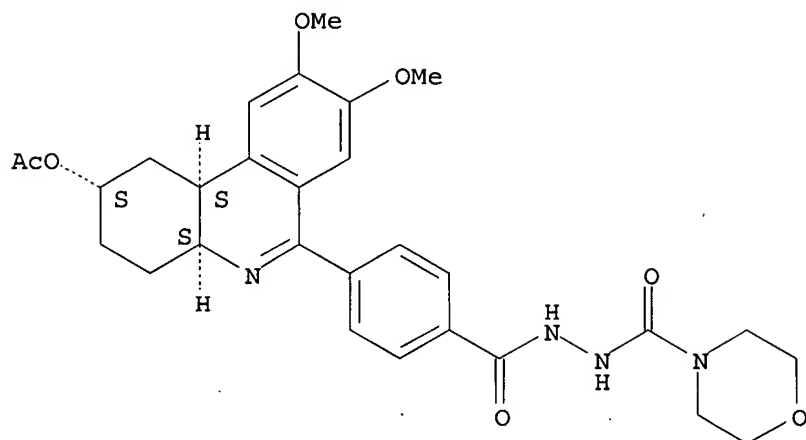
RN 865307-10-4 CAPLUS

CN 4-Morpholinecarboxylic acid, 2-[4-[(2R,4aR,10bR)-2-(acetyloxy)-1,2,3,4,4a,10b-hexahydro-8,9-dimethoxy-6-phenanthridinyl]benzoyl]hydrazide, rel- (CA INDEX NAME)

10524634



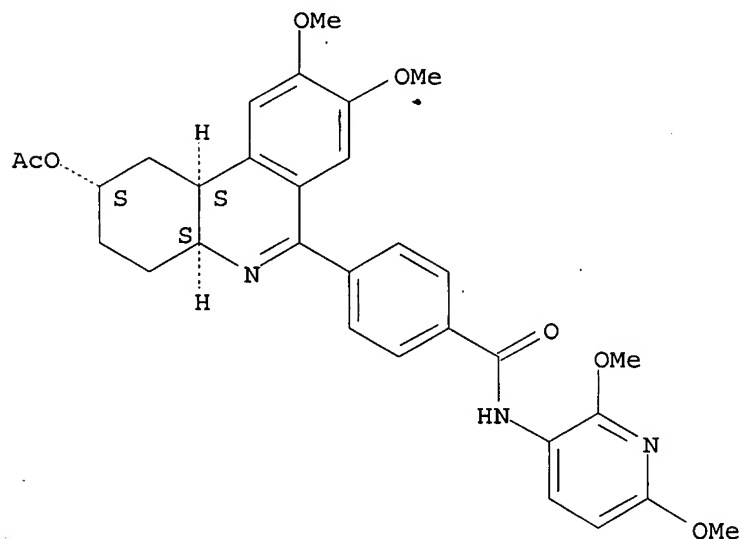
Relative stereochemistry.



RN 865307-11-5 CAPLUS

CN Benzamide, 4-[(2R,4aR,10bR)-2-(acetyloxy)-1,2,3,4,4a,10b-hexahydro-8,9-dimethoxy-6-phenanthridinyl]-N-(2,6-dimethoxy-3-pyridinyl)-, rel- (CA INDEX NAME)

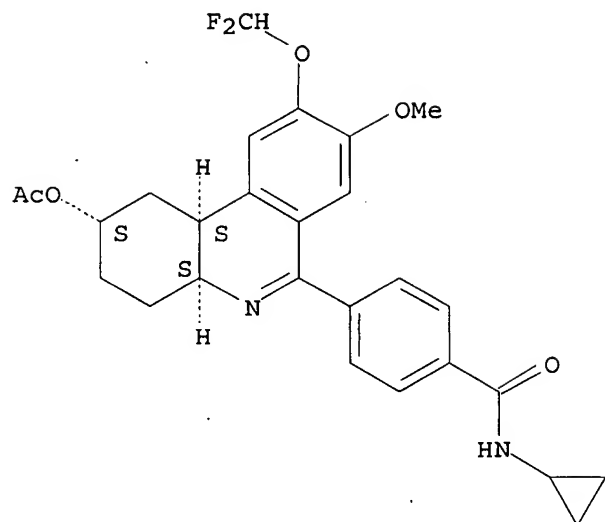
Relative stereochemistry.



RN 865307-13-7 CAPLUS

CN Benzamide, 4-[(2R,4aR,10bR)-2-(acetyloxy)-9-(difluoromethoxy)-1,2,3,4,4a,10b-hexahydro-8-methoxy-6-phenanthridinyl]-N-cyclopropyl-, rel- (CA INDEX NAME)

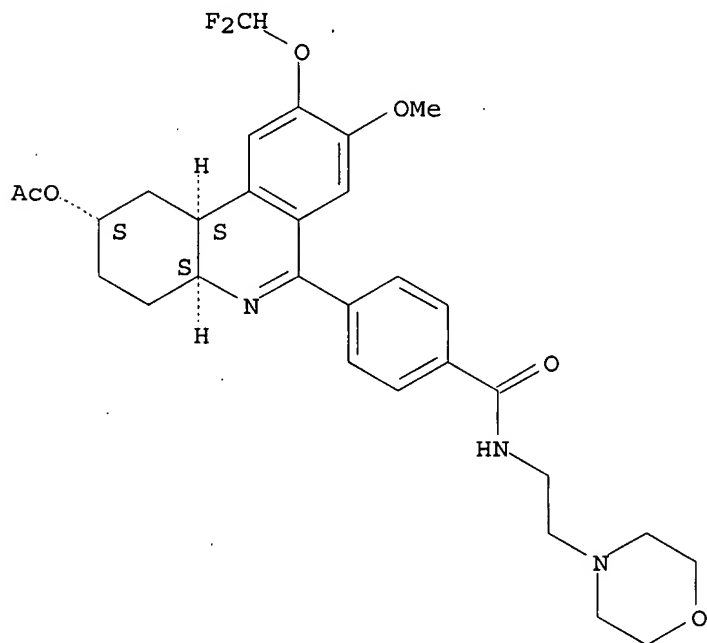
Relative stereochemistry.



RN 865307-15-9 CAPLUS

CN Benzamide, 4-[(2R,4aR,10bR)-2-(acetyloxy)-9-(difluoromethoxy)-1,2,3,4,4a,10b-hexahydro-8-methoxy-6-phenanthridinyl]-N-[2-(4-morpholinyl)ethyl]-, rel- (CA INDEX NAME)

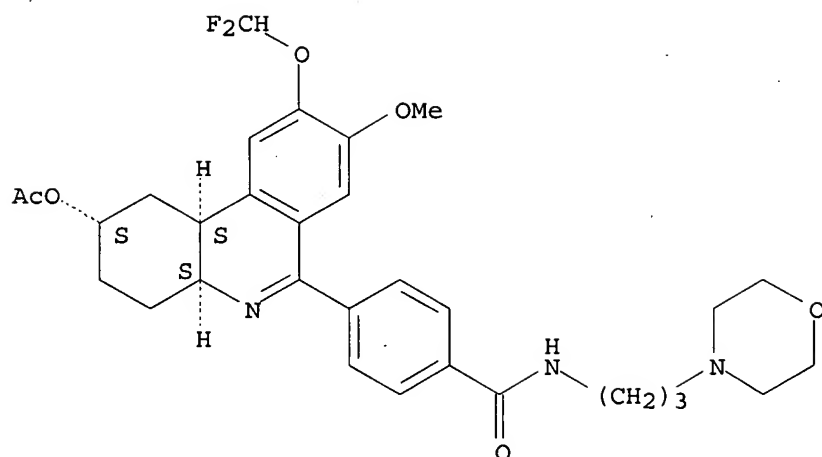
Relative stereochemistry.



RN 865307-16-0 CAPLUS

CN Benzamide, 4-[(2R,4aR,10bR)-2-(acetyloxy)-9-(difluoromethoxy)-1,2,3,4,4a,10b-hexahydro-8-methoxy-6-phenanthridinyl]-N-[3-(4-morpholinyl)propyl]-, rel- (CA INDEX NAME)

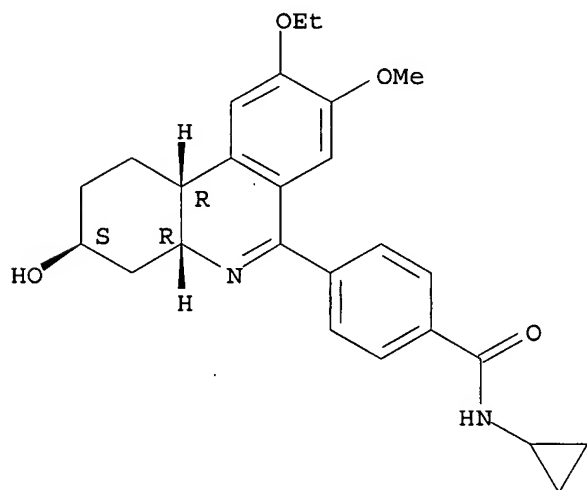
Relative stereochemistry.



RN 865307-33-1 CAPLUS

CN Benzamide, N-cyclopropyl-4-[(3S,4aR,10bR)-9-ethoxy-1,2,3,4,4a,10b-hexahydro-3-hydroxy-8-methoxy-6-phenanthridinyl]- (CA INDEX NAME)

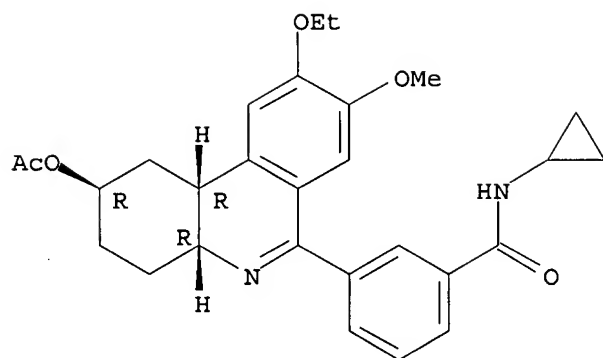
Absolute stereochemistry.



RN 865307-34-2 CAPLUS

CN Benzamide, 3-[(2R,4aR,10bR)-2-(acetyloxy)-9-ethoxy-1,2,3,4,4a,10b-hexahydro-8-methoxy-6-phenanthridinyl]-N-cyclopropyl- (CA INDEX NAME)

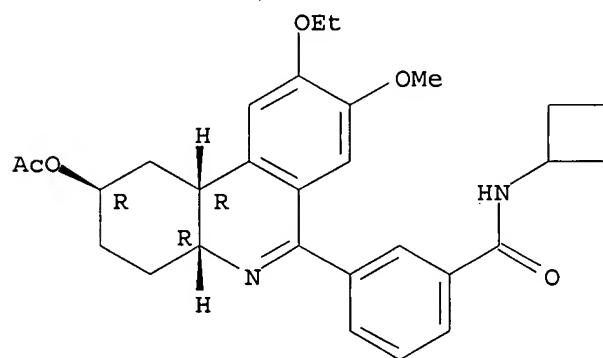
Absolute stereochemistry.



RN 865307-35-3 CAPLUS

CN Benzamide, 3-[(2R,4aR,10bR)-2-(acetyloxy)-9-ethoxy-1,2,3,4,4a,10b-hexahydro-8-methoxy-6-phenanthridinyl]-N-cyclobutyl- (CA INDEX NAME)

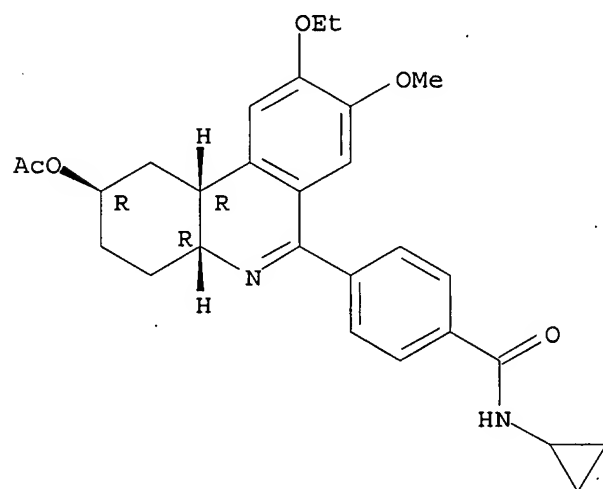
Absolute stereochemistry.



RN 865307-37-5 CAPLUS

CN Benzamide, 4-[(2R,4aR,10bR)-2-(acetyloxy)-9-ethoxy-1,2,3,4,4a,10b-hexahydro-8-methoxy-6-phenanthridinyl]-N-cyclopropyl- (CA INDEX NAME)

Absolute stereochemistry.

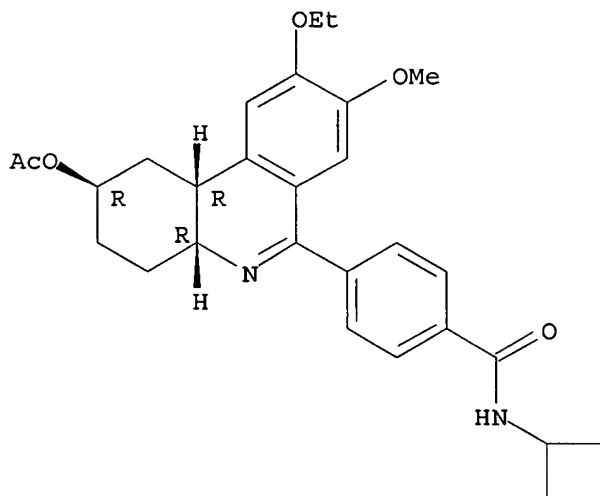


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RN 865307-38-6 CAPLUS

CN Benzamide, 4-[(2R,4aR,10bR)-2-(acetyloxy)-9-ethoxy-1,2,3,4,4a,10b-hexahydro-8-methoxy-6-phenanthridinyl]-N-cyclobutyl- (CA INDEX NAME)

Absolute stereochemistry.



IT 865306-47-4P 865306-48-5P 865306-49-6P  
 865306-50-9P 865306-52-1P 865306-53-2P  
 865306-57-6P 865306-66-7P 865306-67-8P  
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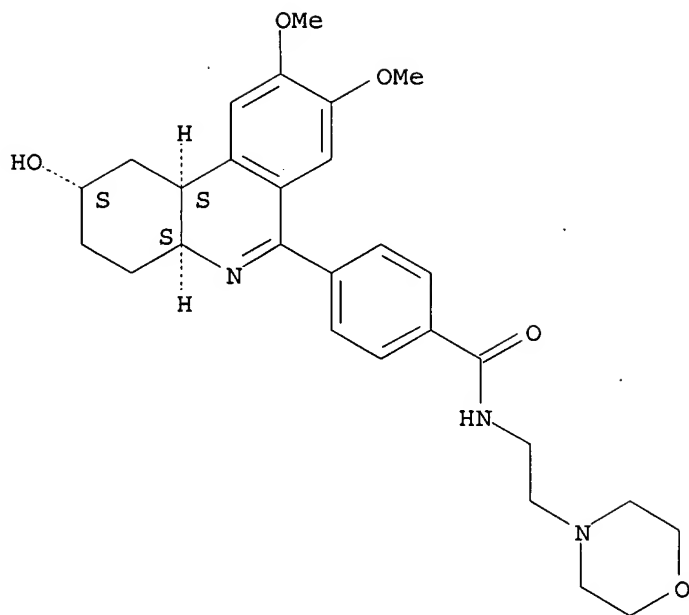
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU  
 (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES  
 (Uses)

(inhibitor; preparation of amido-substituted phenylphenanthridines as PDE4  
 inhibitors for the treatment of respiratory diseases)

RN 865306-47-4 CAPLUS

CN Benzamide, 4-[(2R,4aR,10bR)-1,2,3,4,4a,10b-hexahydro-2-hydroxy-8,9-  
 dimethoxy-6-phenanthridinyl]-N-[2-(4-morpholinyl)ethyl]-, rel- (CA INDEX  
 NAME)

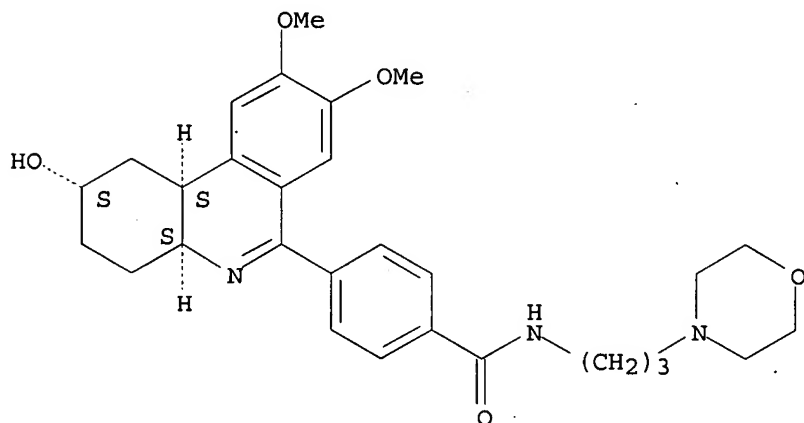
Relative stereochemistry.



RN 865306-48-5 CAPLUS

CN Benzamide, 4- [(2R,4aR,10bR)-1,2,3,4,4a,10b-hexahydro-2-hydroxy-8,9-dimethoxy-6-phenanthridinyl]-N-[3-(4-morpholinyl)propyl]-, rel- (CA INDEX NAME)

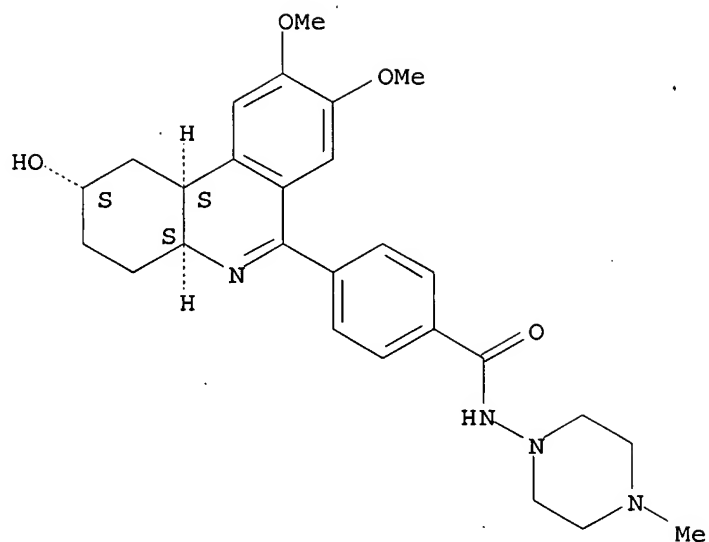
Relative stereochemistry.



RN 865306-49-6 CAPLUS

CN Benzamide, 4- [(2R,4aR,10bR)-1,2,3,4,4a,10b-hexahydro-2-hydroxy-8,9-dimethoxy-6-phenanthridinyl]-N-(4-methyl-1-piperazinyl)-, rel- (CA INDEX NAME)

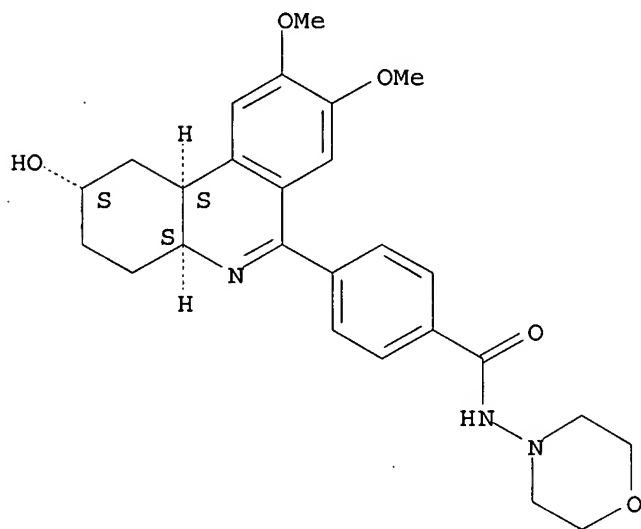
Relative stereochemistry.



RN 865306-50-9 CAPLUS

CN Benzamide, 4-[(2R,4aR,10bR)-1,2,3,4,4a,10b-hexahydro-2-hydroxy-8,9-dimethoxy-6-phenanthridinyl]-N-(4-morpholinyl)-, rel- (CA INDEX NAME)

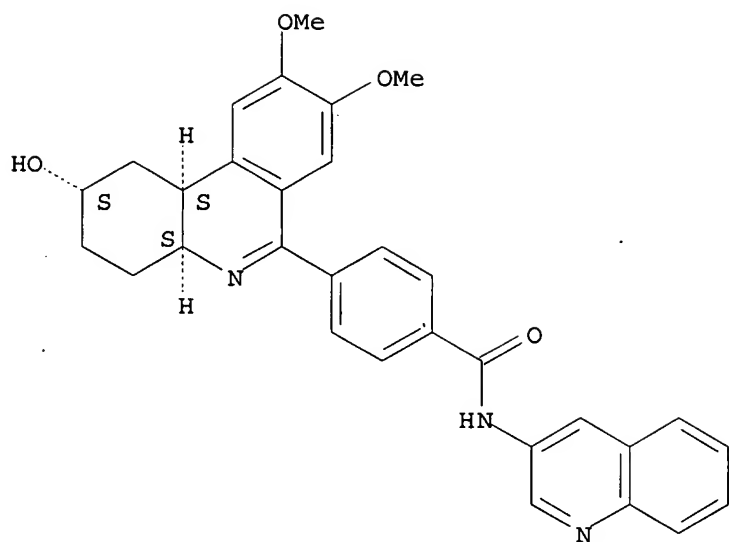
Relative stereochemistry.



RN 865306-52-1 CAPLUS

CN Benzamide, 4-[(2R,4aR,10bR)-1,2,3,4,4a,10b-hexahydro-2-hydroxy-8,9-dimethoxy-6-phenanthridinyl]-N-(3-quinolinyl)-, rel- (CA INDEX NAME)

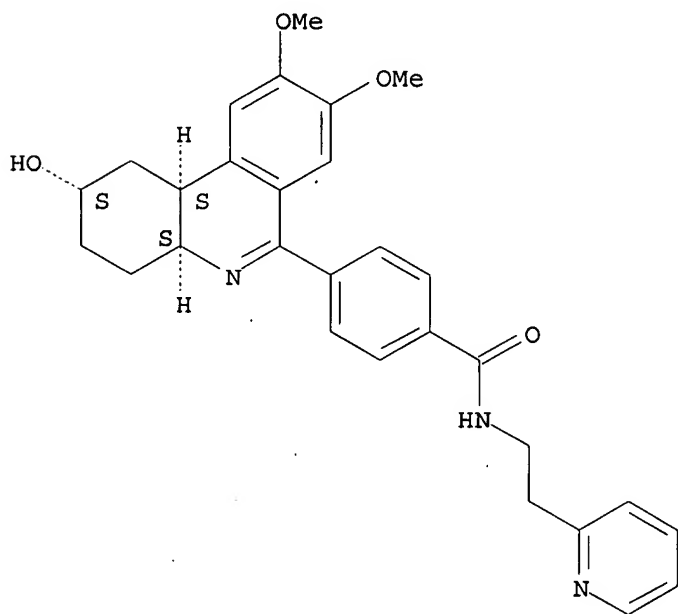
Relative stereochemistry.



RN 865306-53-2 CAPLUS

CN Benzamide, 4-[(2R,4aR,10bR)-1,2,3,4,4a,10b-hexahydro-2-hydroxy-8,9-dimethoxy-6-phenanthridinyl]-N-[2-(2-pyridinyl)ethyl]-, rel- (CA INDEX NAME)

Relative stereochemistry.

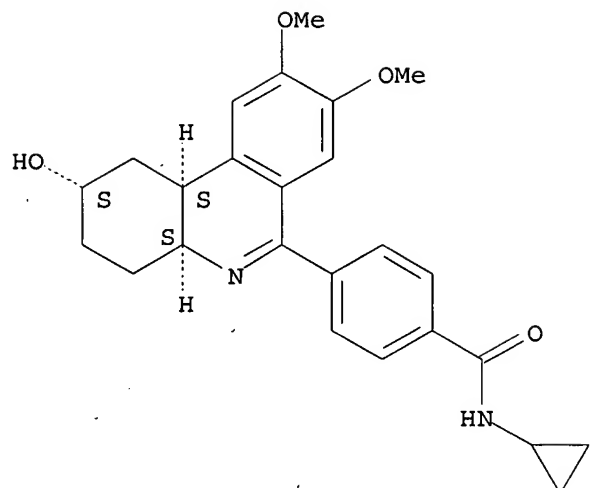


RN 865306-57-6 CAPLUS

CN Benzamide, N-cyclopropyl-4-[(2R,4aR,10bR)-1,2,3,4,4a,10b-hexahydro-2-hydroxy-8,9-dimethoxy-6-phenanthridinyl]-, rel- (CA INDEX NAME)

Relative stereochemistry.

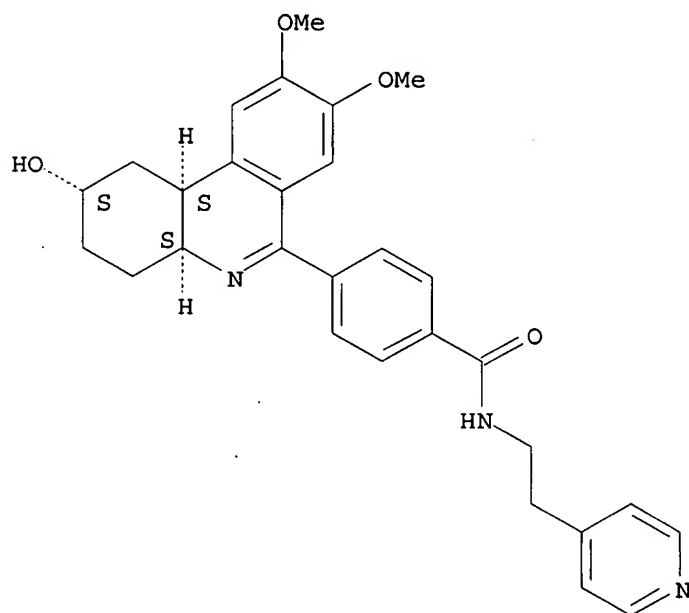




RN 865306-66-7 CAPLUS

CN Benzamide, 4-[(2R,4aR,10bR)-1,2,3,4,4a,10b-hexahydro-2-hydroxy-8,9-dimethoxy-6-phenanthridinyl]-N-[2-(4-pyridinyl)ethyl]-, rel- (CA INDEX NAME)

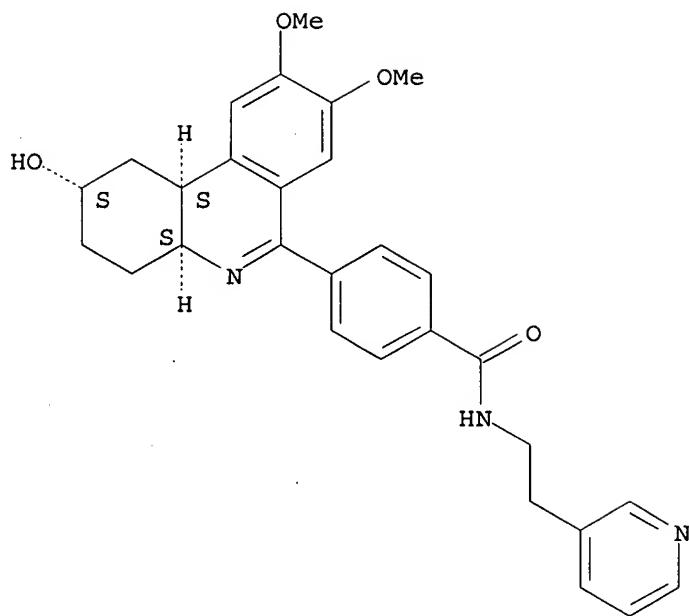
Relative stereochemistry.



RN 865306-67-8 CAPLUS

CN Benzamide, 4-[(2R,4aR,10bR)-1,2,3,4,4a,10b-hexahydro-2-hydroxy-8,9-dimethoxy-6-phenanthridinyl]-N-[2-(3-pyridinyl)ethyl]-, rel- (CA INDEX NAME)

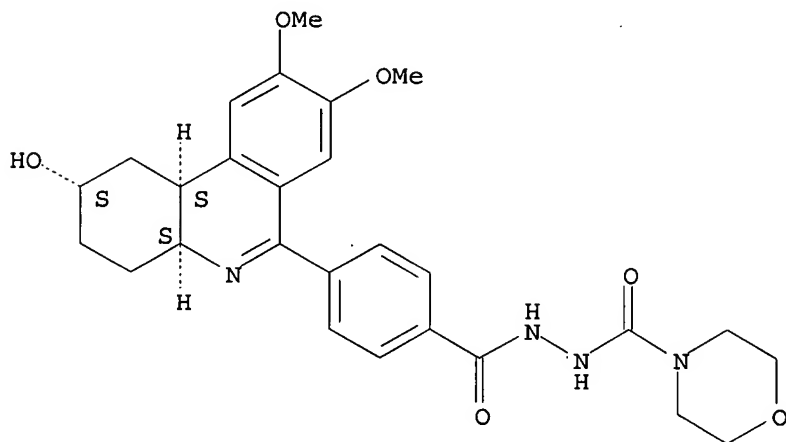
Relative stereochemistry.



RN 865306-68-9 CAPLUS

CN 4-Morpholinecarboxylic acid, 2-[4-[(2R,4aR,10bR)-1,2,3,4,4a,10b-hexahydro-2-hydroxy-8,9-dimethoxy-6-phenanthridinyl]benzoyl]hydrazide, rel- (CA INDEX NAME)

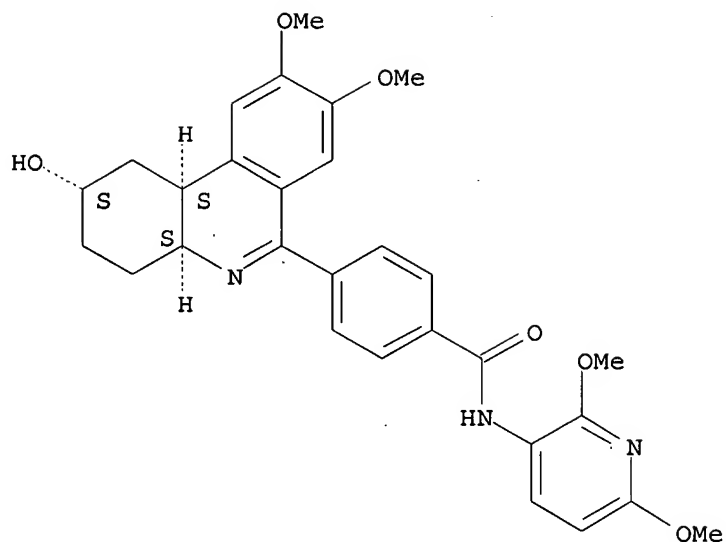
Relative stereochemistry.



RN 865306-69-0 CAPLUS

CN Benzamide, N-(2,6-dimethoxy-3-pyridinyl)-4-[(2R,4aR,10bR)-1,2,3,4,4a,10b-hexahydro-2-hydroxy-8,9-dimethoxy-6-phenanthridinyl]-, rel- (CA INDEX NAME)

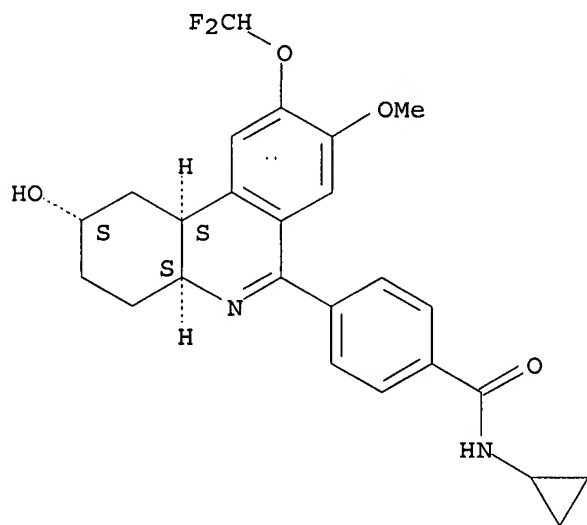
Relative stereochemistry.



RN 865306-71-4 CAPLUS

CN Benzamide, N-cyclopropyl-4-[(2R,4aR,10bR)-9-(difluoromethoxy)-1,2,3,4,4a,10b-hexahydro-2-hydroxy-8-methoxy-6-phenanthridinyl]-, rel- (CA INDEX NAME)

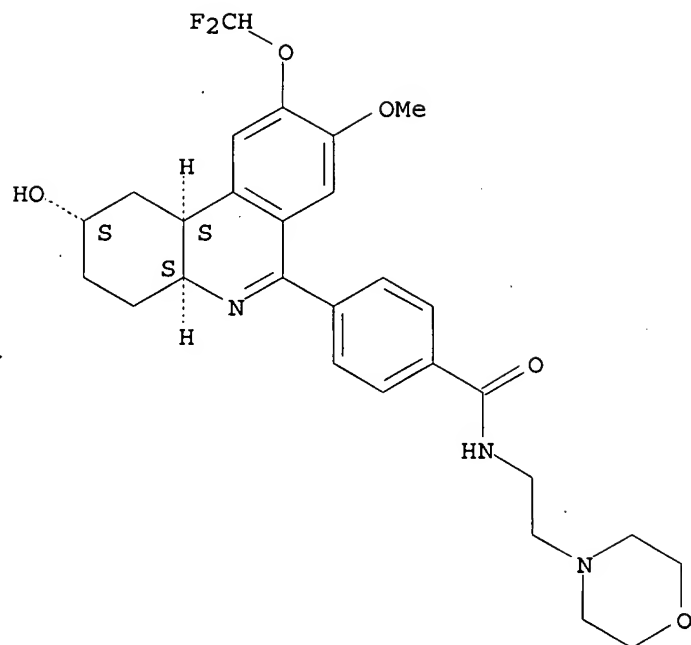
Relative stereochemistry.



RN 865306-73-6 CAPLUS

CN Benzamide, 4-[(2R,4aR,10bR)-9-(difluoromethoxy)-1,2,3,4,4a,10b-hexahydro-2-hydroxy-8-methoxy-6-phenanthridinyl]-N-[2-(4-morpholinyl)ethyl]-, rel- (CA INDEX NAME)

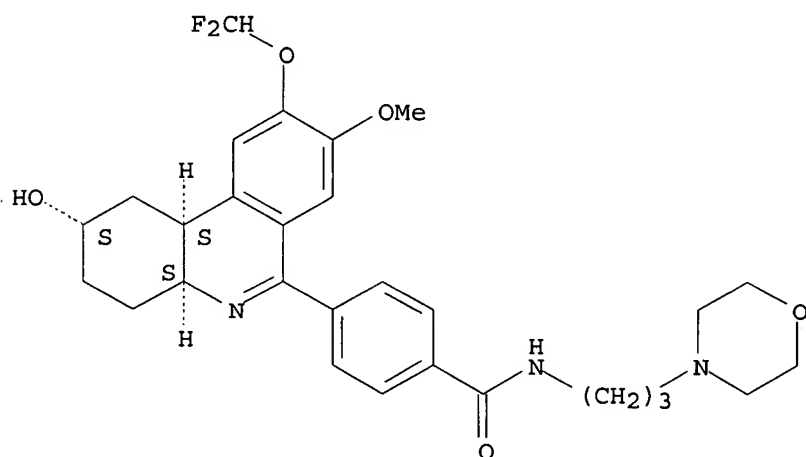
Relative stereochemistry.



RN 865306-74-7 CAPLUS

CN Benzamide, 4- [(2R,4aR,10bR)-9-(difluoromethoxy)-1,2,3,4,4a,10b-hexahydro-2-hydroxy-8-methoxy-6-phenanthridinyl]-N-[3-(4-morpholinyl)propyl]-, rel- (CA INDEX NAME)

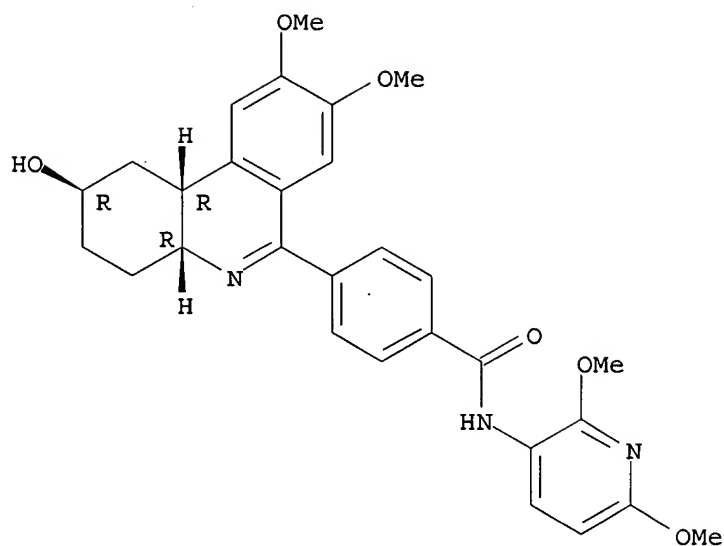
Relative stereochemistry.



RN 865307-23-9 CAPLUS

CN Benzamide, N-(2,6-dimethoxy-3-pyridinyl)-4-[(2R,4aR,10bR)-1,2,3,4,4a,10b-hexahydro-2-hydroxy-8,9-dimethoxy-6-phenanthridinyl]- (CA INDEX NAME)

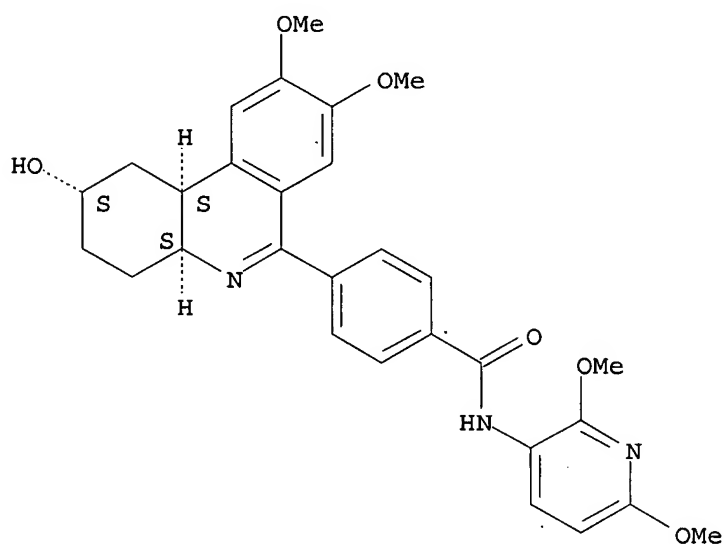
Absolute stereochemistry. Rotation (-).



RN 865307-24-0 CAPLUS

CN Benzamide, N-(2,6-dimethoxy-3-pyridinyl)-4-[(2S,4aS,10bS)-1,2,3,4,4a,10b-hexahydro-2-hydroxy-8,9-dimethoxy-6-phenanthridinyl]- (CA INDEX NAME)

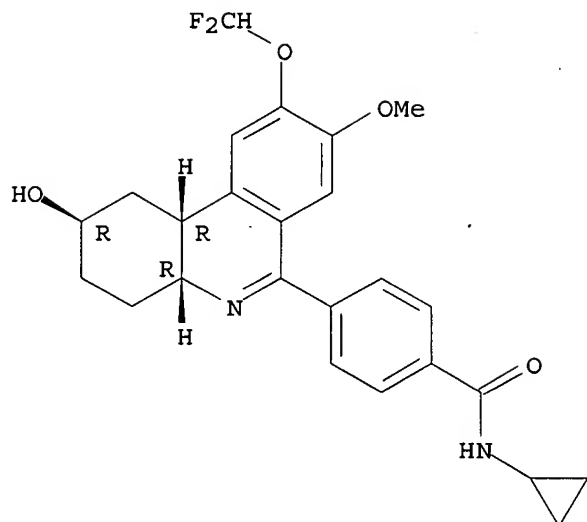
Absolute stereochemistry.



RN 865307-25-1 CAPLUS

CN Benzamide, N-cyclopropyl-4-[(2R,4aR,10bR)-9-(difluoromethoxy)-1,2,3,4,4a,10b-hexahydro-2-hydroxy-8-methoxy-6-phenanthridinyl]- (CA INDEX NAME)

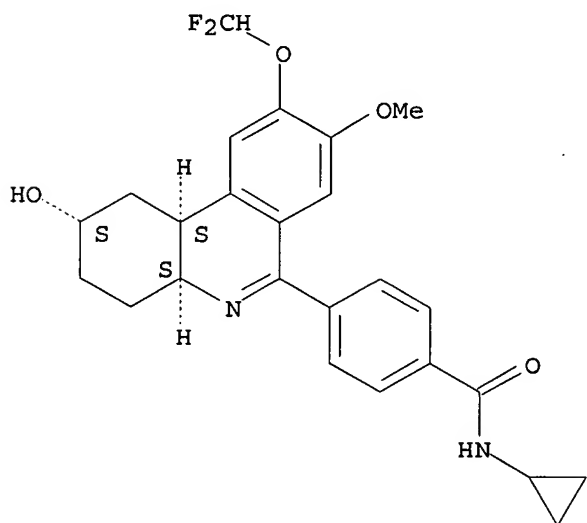
Absolute stereochemistry. Rotation (-).



RN 865307-26-2 CAPLUS

CN Benzamide, N-cyclopropyl-4-[(2S,4aS,10bS)-9-(difluoromethoxy)-1,2,3,4,4a,10b-hexahydro-2-hydroxy-8-methoxy-6-phenanthridinyl] - (CA INDEX NAME)

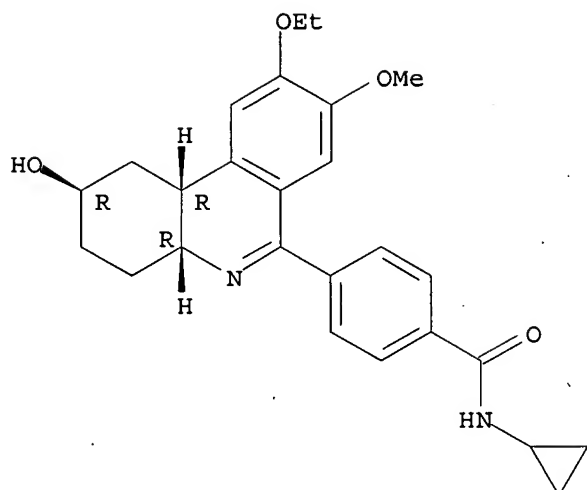
Absolute stereochemistry.



RN 865307-27-3 CAPLUS

CN Benzamide, N-cyclopropyl-4-[(2R,4aR,10bR)-9-ethoxy-1,2,3,4,4a,10b-hexahydro-2-hydroxy-8-methoxy-6-phenanthridinyl] - (CA INDEX NAME)

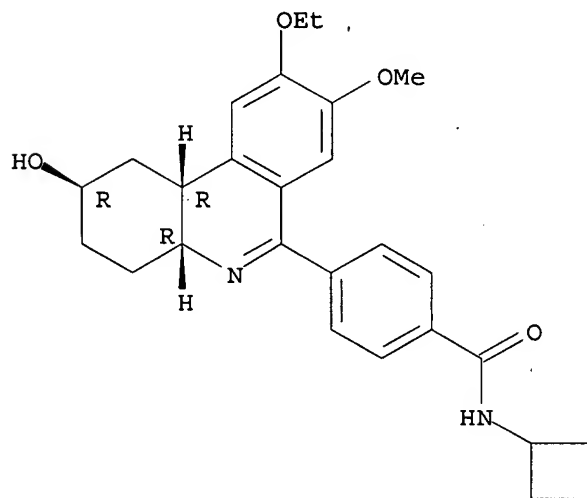
Absolute stereochemistry.



RN 865307-28-4 CAPLUS

CN Benzamide, N-cyclobutyl-4-[(2R,4aR,10bR)-9-ethoxy-1,2,3,4,4a,10b-hexahydro-2-hydroxy-8-methoxy-6-phenanthridinyl]- (CA INDEX NAME)

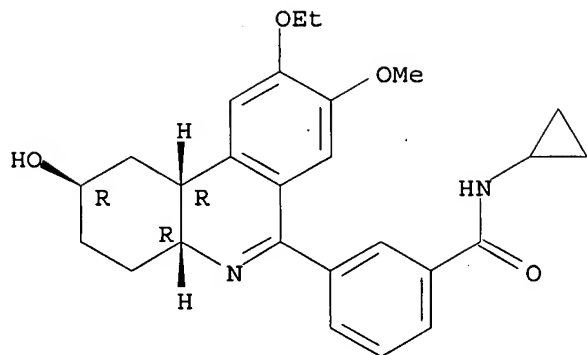
Absolute stereochemistry.



RN 865307-30-8 CAPLUS

CN Benzamide, N-cyclopropyl-3-[(2R,4aR,10bR)-9-ethoxy-1,2,3,4,4a,10b-hexahydro-2-hydroxy-8-methoxy-6-phenanthridinyl]- (CA INDEX NAME)

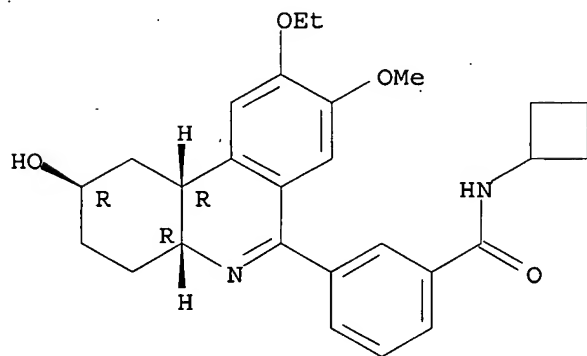
Absolute stereochemistry.



RN 865307-31-9 CAPLUS

CN Benzamide, N-cyclobutyl-3-[(2R,4aR,10bR)-9-ethoxy-1,2,3,4,4a,10b-hexahydro-2-hydroxy-8-methoxy-6-phenanthridinyl]- (CA INDEX NAME)

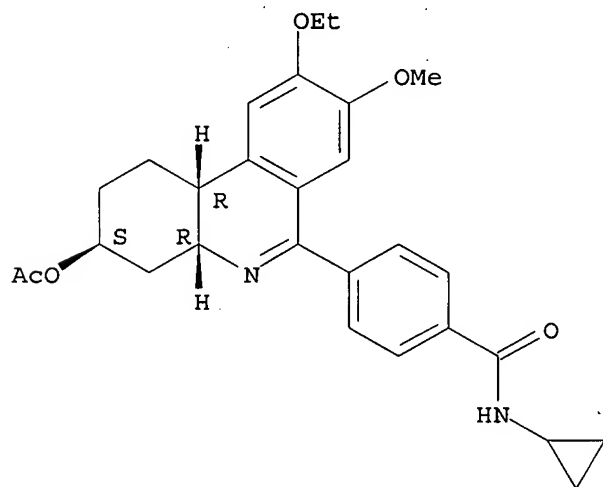
Absolute stereochemistry.



RN 865307-40-0 CAPLUS

CN Benzamide, 4-[(3S,4aR,10bR)-3-(acetyloxy)-9-ethoxy-1,2,3,4,4a,10b-hexahydro-8-methoxy-6-phenanthridinyl]-N-cyclopropyl- (CA INDEX NAME)

Absolute stereochemistry.





RE.CNT 3      THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4      ANSWER 3 OF 7    CAPLUS    COPYRIGHT 2007 ACS on STN  
GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY -    AVAILABLE VIA OFFLINE PRINT \*

AB    Title compds. I [R1 = OH, alkoxy, cycloalkoxy, etc.; R2 = OH, cycloalkylmethoxy, cycloalkoxy, etc. or R1 and R2 together form alkylenedioxy group; R3 = H or alkyl; R4 = OR9 and R5 = H or alkyl or R4 = H or alkyl and R5 = OR9; R6 = H or alkyl; R7 = (un)substituted guanidiny1; R8 = H, halo, nitro, etc.; R9 = H, alkyl, alkoxyalkyl, etc.] and their pharmaceutically acceptable salts, are prepared and disclosed as phosphodiesterase 4 (PDE4) inhibitors. Thus, e.g., II was prepared by coupling of 4-((2RS,4aRS,10bRS)-2-acetoxy-8,9-dimethoxy-1,2,3,4,4a,10b-hexahydro-phenanthridin-6-yl)-benzoic acid with the resp. guanidiny1 derivative followed by hydrolysis. The activity of I was evaluated using scintillation proximity assays and it was revealed that selected compds. of the invention displayed -log IC50 values higher than 7.5. I as inhibitor of PDE4 should provide useful in the treatment of respiratory disorders. Pharmaceutical compns. comprising I are disclosed.

AN    2005:902858    CAPLUS

DN    143:248297

TI    Preparation of guanidiny1 hydroxyphenylphenanthridines as PDE4 inhibitors  
IN    Schmidt, Beate; Flockerzi, Dieter; Hatzelmann, Armin; Zitt, Christof;  
Barsig, Johannes; Marx, Degenhard; Kley, Hans-Peter; Kautz, Ulrich

PA    Altana Pharma A.-G., Germany

SO    PCT Int. Appl., 72 pp.

CODEN: PIXXD2

DT    Patent

LA    English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005077906	A1	20050825	WO 2005-EP50708	20050217
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2005212857	A1	20050825	EP 2004-3592	A 20040218
				AU 2005-212857	20050217
				EP 2004-3592	A 20040218
				WO 2005-EP50708	W 20050217
	CA 2556086	A1	20050825	CA 2005-2556086	20050217
				EP 2004-3592	A 20040218
				WO 2005-EP50708	W 20050217
	EP 1720835	A1	20061115	EP 2005-708038	20050217
	R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,				

IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL, BA,  
HR, LV, MK, YU

			EP 2004-3592	A	20040218
			WO 2005-EP50708	W	20050217
JP 2007523130	T	20070816	JP 2006-553593		20050217
			EP 2004-3592	A	20040218
			WO 2005-EP50708	W	20050217
US 2007167482	A1	20070719	US 2006-589082		20060905
			EP 2004-3592	A	20040218
			WO 2005-EP50708	W	20050217

OS MARPAT 143:248297

IT 862993-72-4P 862993-73-5P 862993-74-6P

862993-75-7P 862993-76-8P 862993-77-9P

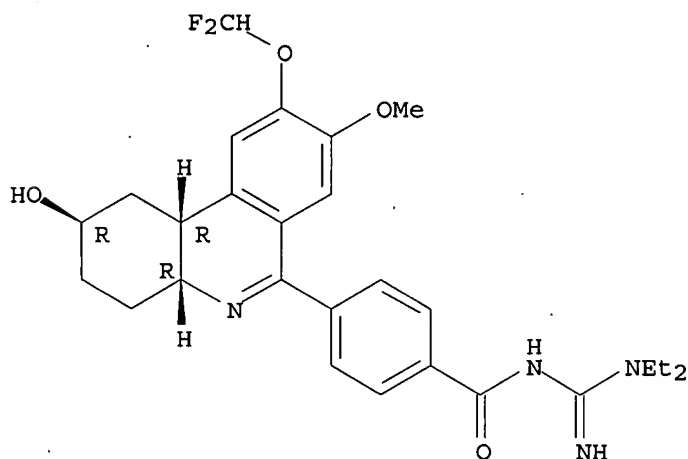
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU  
(Therapeutic use); BIOL (Biological study); PREP (Preparation); USES  
(Uses)

(preparation of guanidiny l hydroxyphenylphenanthridines as PDE4 inhibitors)

RN 862993-72-4 CAPLUS

CN Benzamide, N-[(diethylamino)iminomethyl]-4-[(2R,4aR,10bR)-9-  
(difluoromethoxy)-1,2,3,4,4a,10b-hexahydro-2-hydroxy-8-methoxy-6-  
phenanthridinyl]-, rel- (CA INDEX NAME)

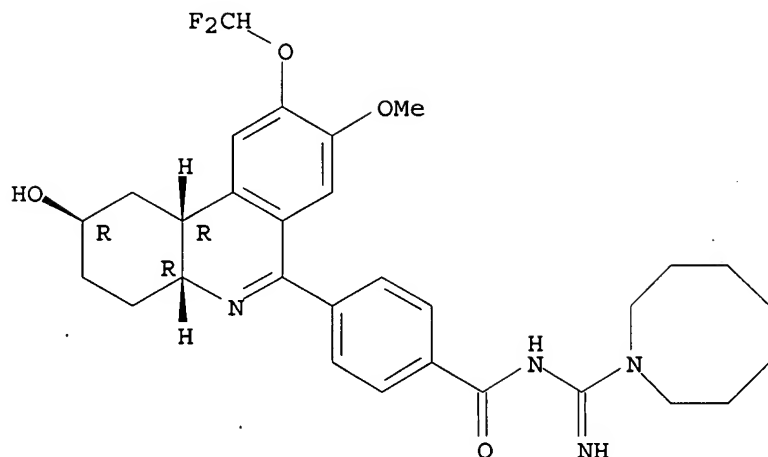
Relative stereochemistry.



RN 862993-73-5 CAPLUS

CN Benzamide, 4-[(2R,4aR,10bR)-9-(difluoromethoxy)-1,2,3,4,4a,10b-hexahydro-2-  
hydroxy-8-methoxy-6-phenanthridinyl]-N-[(hexahydro-1(2H)-  
azocinyl)iminomethyl]-, rel- (CA INDEX NAME)

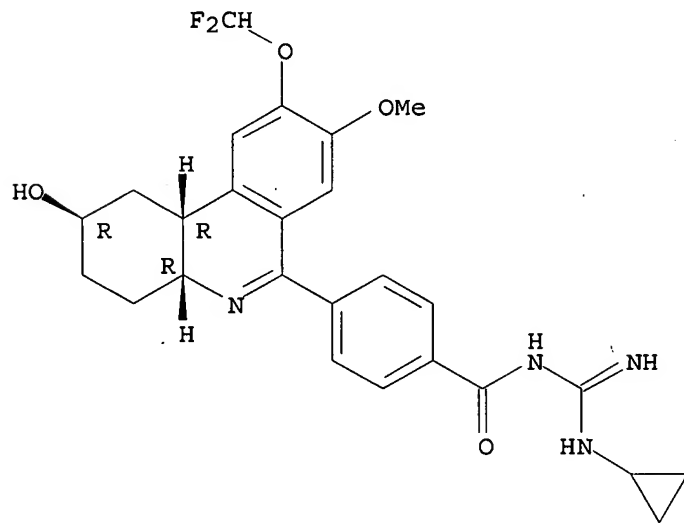
Relative stereochemistry.



RN 862993-74-6 CAPLUS

CN Benzamide, N-[(cyclopropylamino)iminomethyl]-4-[(2R,4aR,10bR)-9-(difluoromethoxy)-1,2,3,4,4a,10b-hexahydro-2-hydroxy-8-methoxy-6-phenanthridinyl]-, rel- (CA INDEX NAME)

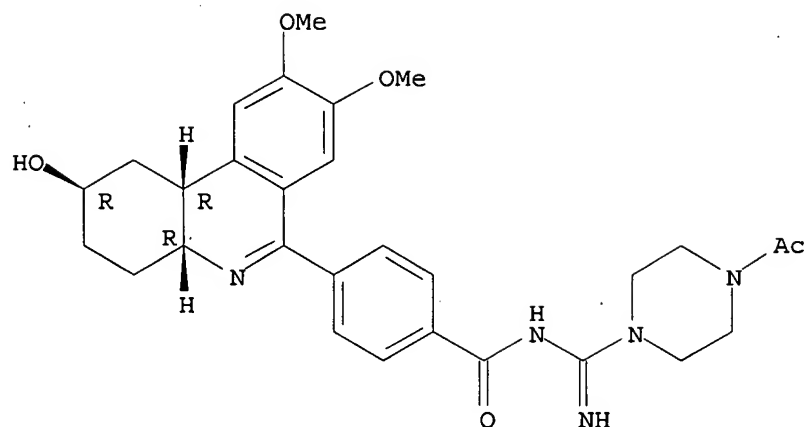
Relative stereochemistry.



RN 862993-75-7 CAPLUS

CN Benzamide, N-[(4-acetyl-1-piperazinyl)iminomethyl]-4-[(2R,4aR,10bR)-1,2,3,4,4a,10b-hexahydro-2-hydroxy-8,9-dimethoxy-6-phenanthridinyl]-, rel- (CA INDEX NAME)

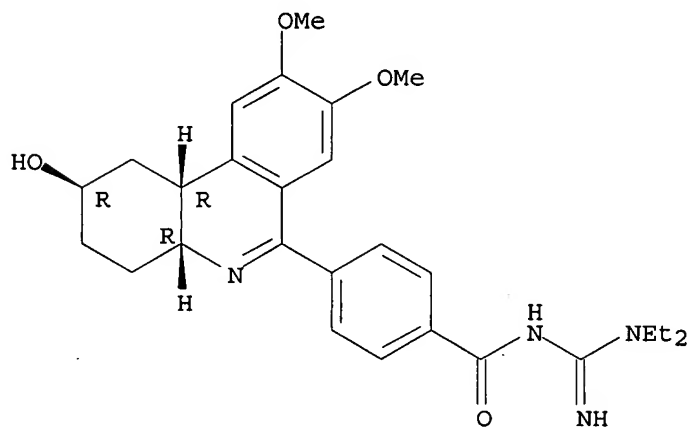
Relative stereochemistry.



RN 862993-76-8 CAPLUS

CN Benzamide, N-[(diethylamino)iminomethyl]-4-[(2R,4aR,10bR)-1,2,3,4,4a,10b-hexahydro-2-hydroxy-8,9-dimethoxy-6-phenanthridinyl]-, rel- (CA INDEX NAME).

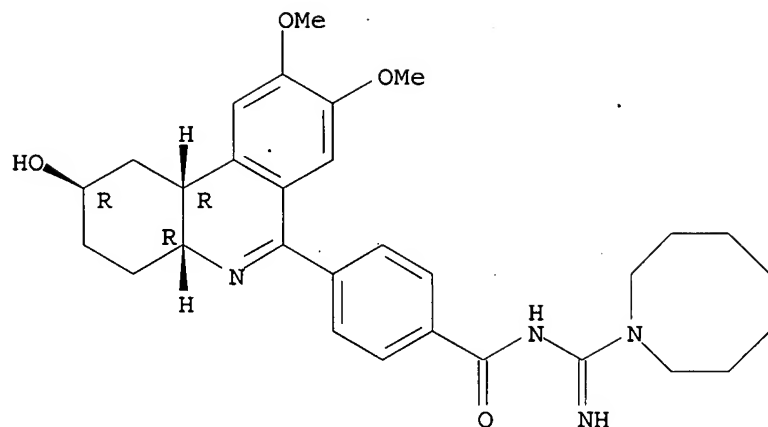
Relative stereochemistry.



RN 862993-77-9 CAPLUS

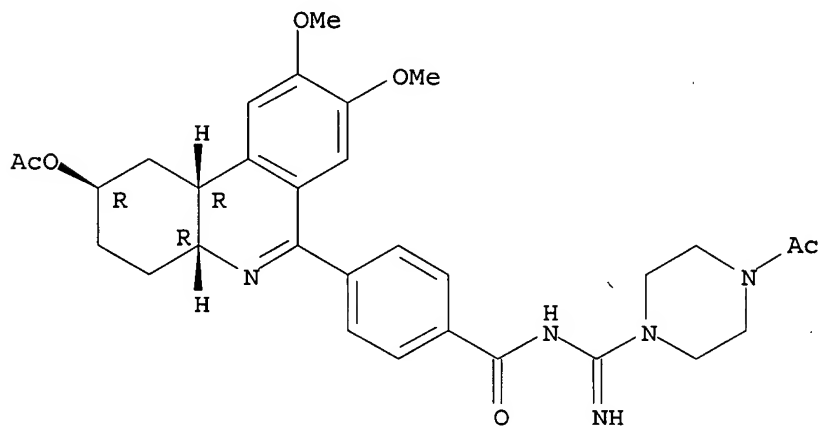
CN Benzamide, N-[(hexahydro-1(2H)-azocinyl)iminomethyl]-4-[(2R,4aR,10bR)-1,2,3,4,4a,10b-hexahydro-2-hydroxy-8,9-dimethoxy-6-phenanthridinyl]-, rel- (CA INDEX NAME)

Relative stereochemistry.



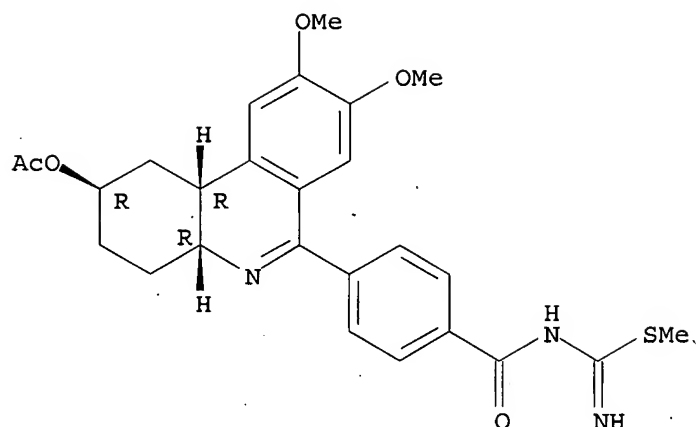
IT 862993-78-0P 862993-79-1P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (preparation of guanidinyll hydroxyphenylphenanthridines as PDE4 inhibitors)  
 RN 862993-78-0 CAPLUS  
 CN Benzamide, 4- [(2R,4aR,10bR)-2-(acetyloxy)-1,2,3,4,4a,10b-hexahydro-8,9-  
 dimethoxy-6-phenanthridinyl]-N-[(4-acetyl-1-piperazinyl)iminomethyl]-,  
 rel- (CA INDEX NAME)

Relative stereochemistry.



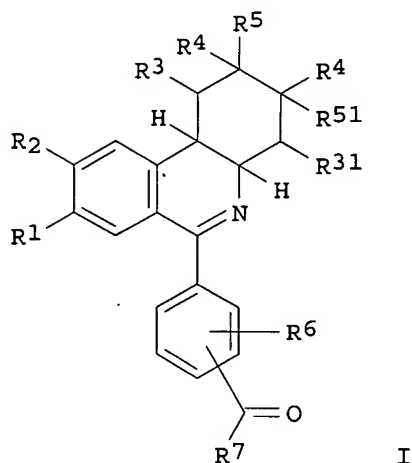
RN 862993-79-1 CAPLUS  
 CN Carbamimidothioic acid, [4-[(2R,4aR,10bR)-2-(acetyloxy)-1,2,3,4,4a,10b-  
 hexahydro-8,9-dimethoxy-6-phenanthridinyl]benzoyl]-, methyl ester, rel-  
 (9CI) (CA INDEX NAME)

Relative stereochemistry.



RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2007 ACS on STN  
GI



I

AB The title compds. [I; R1, R2 = HO, C1-4 alkoxy, C3-7 cycloalkoxy, C3-7 cycloalkylmethoxy or completely or predominantly fluorine-substituted C1-4 alkoxy; or R1 and R2 together are a C1-2 alkylendioxy group; R3, R31 = H, C1-4 alkyl; or R3 and R31 together are a C1-4 alkylene group; R4 = H, C1-4 alkyl and R51 = H; or R5 and R51 together represent an addnl. bond; R6 = H, halogen, nitro, C1-4 alkyl, CF3, C1-4 alkoxy; R7 = (un)substituted guanidino, heterocyclamino, 1-heterocycl-1-(imino)methyl, etc.] or salts thereof, as well as N-oxides, enantiomers, E/Z isomers, or tautomers thereof and their salts are prepared These compds. I are useful for producing pharmaceutical compns. for treating respiratory disorders and/or dermatoses. Also disclosed is a method for treating an illness treatable by administration of a PDE4 inhibitor in a patient comprising administering to said patient in need thereof a therapeutically effective amount of a compound of formula I, in particular airway disorders.

N'-[1-[4-[(4aR,10bR)-8,9-Dimethoxy-1,2,3,4,4a,10b-hexahydrophenanthridin-6-yl]phenyl]methanoyl]-N,N-diethylguanidine. Thus, 4.9 g 1,1-diethylguanidinium sulfate was suspended in 120 mL MeCN, treated with 720 mg NaOH in 25 mL MeOH, and stirred at room temperature for 1 h. The solvent was evaporated and the residue was suspended in 200 mL CH<sub>2</sub>Cl<sub>2</sub>, treated with 5.2 g Na<sub>2</sub>CO<sub>3</sub> and then dropwise with a solution of 4.2 g 4-[(4aR,10bR)-8,9-dimethoxy-1,2,3,4,4a,10b-hexahydrophenanthridin-6-yl]benzoyl chloride hydrochloride in 200 mL CH<sub>2</sub>Cl<sub>2</sub> dropwise, and stirred at room temperature for 15 h to give, after workup and silica gel chromatog., N'-[1-[4-[(4aR,10bR)-8,9-Dimethoxy-1,2,3,4,4a,10b-hexahydrophenanthridin-6-yl]phenyl]methanoyl]-N,N-diethylguanidine (II). 12 Compds. I including II showed -logIC<sub>50</sub> (mol/L) of >8 against phosphodiesterase 4.

AN 2004:182846 CAPLUS  
 DN 140:235725  
 TI Preparation of 6-phenylphenanthridine derivatives as phosphodiesterase 4 (PDE4) inhibitors  
 IN Kley, Hans-Peter; Hatzelmann, Armin; Barsig, Johannes; Marx, Degenhard; Flockerzi, Dieter; Schmidt, Beate; Weinbrenner, Steffen  
 PA Altana Pharma A.-G., Germany  
 SO PCT Int. Appl., 49 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004018431	A2	20040304	WO 2003-EP8967	20030813
	WO 2004018431	A3	20040422		
	W:	AE, AL, AU, BA, BR, CA, CN, CO, DZ, EC, EE, HR, ID, IL, IN, IS, JP, KR, LT, LV, MA, MK, MX, NO, NZ, PH, PL, SG, TN, UA, US, VN, YU, ZA, ZW			
	RW:	AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR			
	CA 2495597	A1	20040304	EP 2002-18530	A 20020817
				CA 2003-2495597	20030813
				EP 2002-18530	A 20020817
				WO 2003-EP8967	W 20030813
	AU 2003253408	A1	20040311	AU 2003-253408	20030813
				EP 2002-18530	A 20020817
				WO 2003-EP8967	W 20030813
	EP 1537086	A2	20050608	EP 2003-792307	20030813
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK			
				EP 2002-18530	A 20020817
				WO 2003-EP8967	W 20030813
	JP 2005537312	T	20051208	JP 2004-530135	20030813
				EP 2002-18530	A 20020817
				WO 2003-EP8967	W 20030813
	US 2006116518	A1	20060601	US 2005-524634	20050216
				EP 2002-18530	A 20020817
				WO 2003-EP8967	W 20030813
OS	MARPAT 140:235725				
IT	667422-55-1P 667422-56-2P 667422-57-3P				
	667422-58-4P 667422-59-5P 667422-60-8P				
	667422-61-9P 667422-62-0P 667422-63-1P				
	667422-64-2P 667422-65-3P 667422-66-4P				
	667422-67-5P				

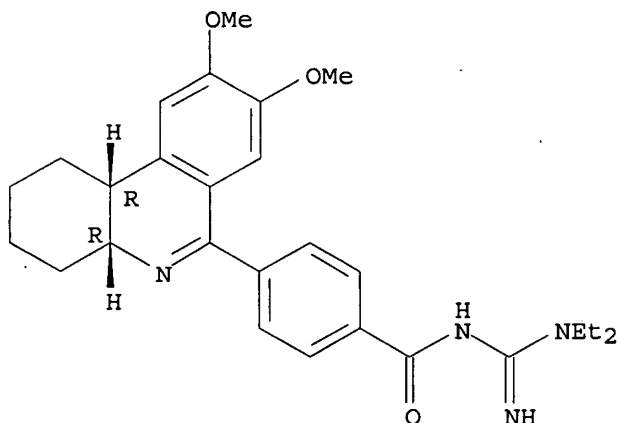
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of phenylphenanthridine derivs. as phosphodiesterase 4 (PDE4) inhibitors for treating respiratory disorders and/or dermatoses dermatosis)

RN 667422-55-1 CAPLUS

CN Benzamide, N-[(diethylamino)iminomethyl]-4-[(4aR,10bR)-1,2,3,4,4a,10b-hexahydro-8,9-dimethoxy-6-phenanthridinyl]- (CA INDEX NAME)

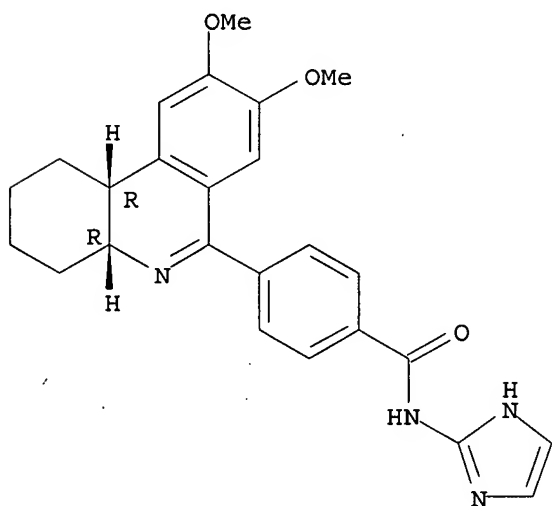
Absolute stereochemistry.



RN 667422-56-2 CAPLUS

CN Benzamide, 4-[(4aR,10bR)-1,2,3,4,4a,10b-hexahydro-8,9-dimethoxy-6-phenanthridinyl]-N-1H-imidazol-2-yl- (CA INDEX NAME)

Absolute stereochemistry.

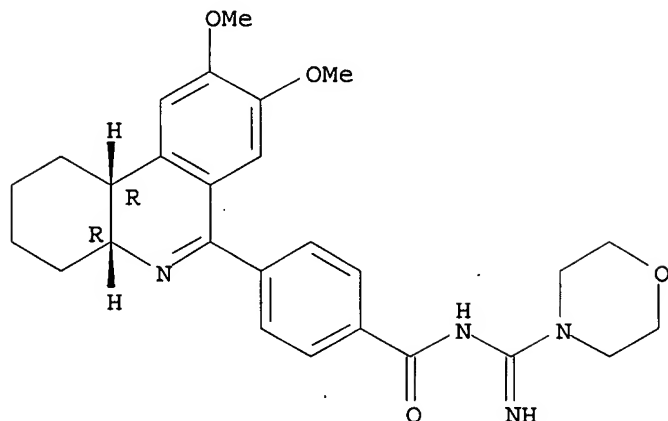


RN 667422-57-3 CAPLUS

CN Benzamide, 4-[(4aR,10bR)-1,2,3,4,4a,10b-hexahydro-8,9-dimethoxy-6-phenanthridinyl]-N-(imino-4-morpholinylmethyl)- (CA INDEX NAME)



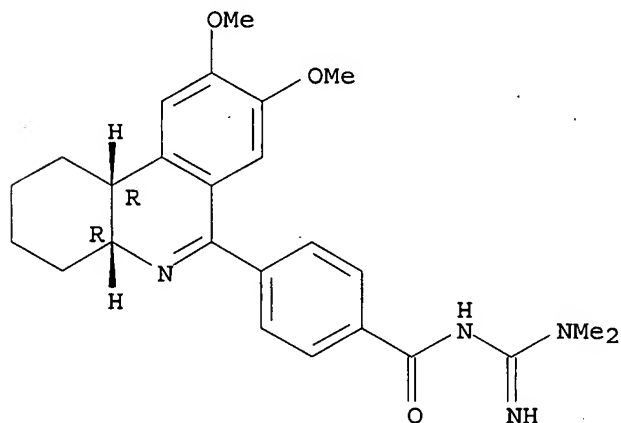
Absolute stereochemistry.



RN 667422-58-4 CAPLUS

CN Benzamide, N-[(dimethylamino)iminomethyl]-4-[(4aR,10bR)-1,2,3,4,4a,10b-hexahydro-8,9-dimethoxy-6-phenanthridinyl]- (CA INDEX NAME)

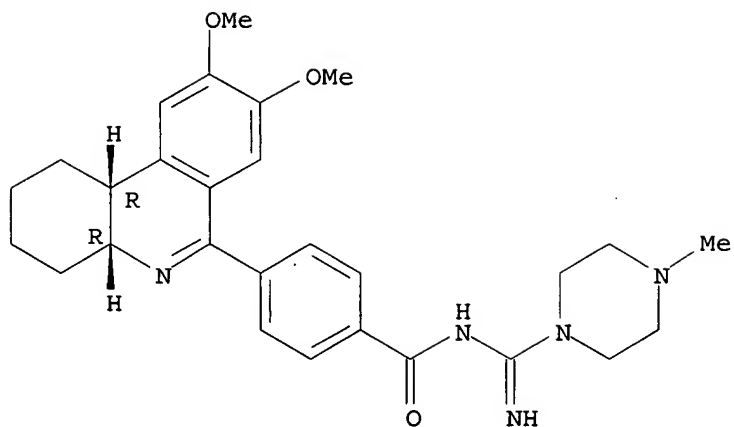
Absolute stereochemistry.



RN 667422-59-5 CAPLUS

CN Benzamide, 4-[(4aR,10bR)-1,2,3,4,4a,10b-hexahydro-8,9-dimethoxy-6-phenanthridinyl]-N-[imino(4-methyl-1-piperazinyl)methyl]- (CA INDEX NAME)

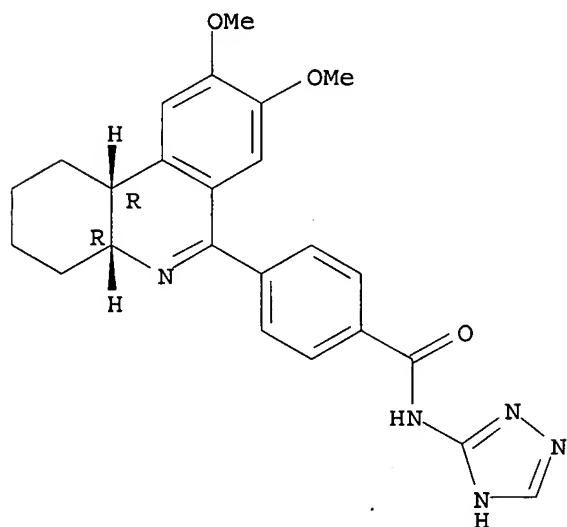
Absolute stereochemistry.



RN 667422-60-8 CAPLUS

CN Benzamide, 4-[(4aR,10bR)-1,2,3,4,4a,10b-hexahydro-8,9-dimethoxy-6-phenanthridinyl]-N-1H-1,2,4-triazol-3-yl- (9CI) (CA INDEX NAME)

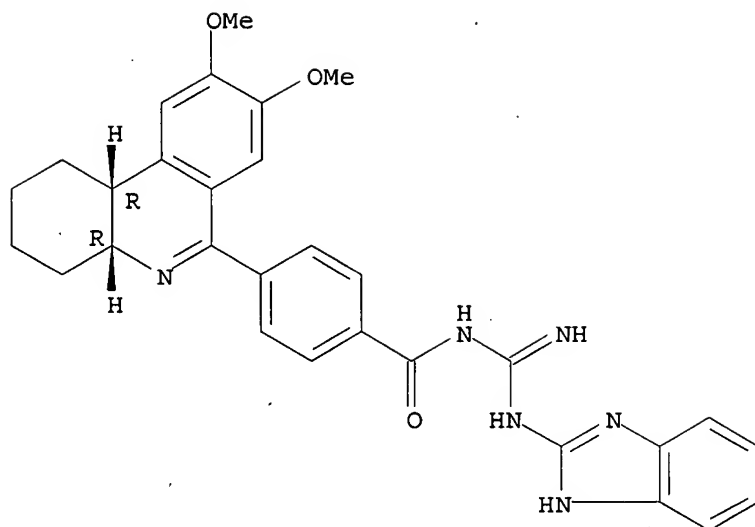
Absolute stereochemistry.



RN 667422-61-9 CAPLUS

CN Benzamide, N-[amino(1H-benzimidazol-2-ylamino)methylene]-4-[(4aR,10bR)-1,2,3,4,4a,10b-hexahydro-8,9-dimethoxy-6-phenanthridinyl]- (9CI) (CA INDEX NAME)

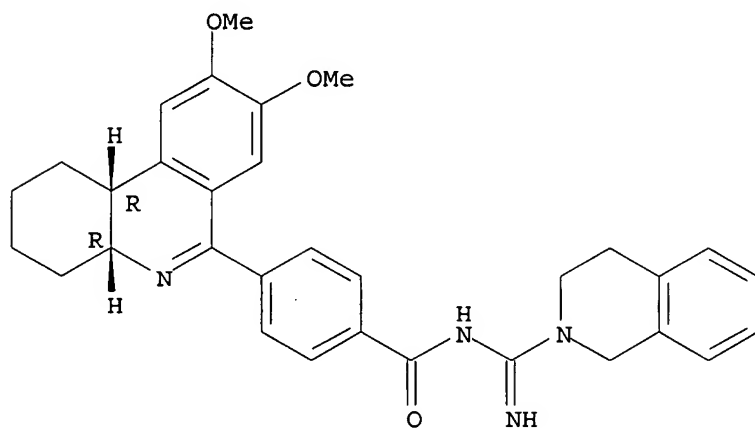
Absolute stereochemistry.



RN 667422-62-0 CAPLUS

CN Benzamide, N-[(3,4-dihydro-2(1H)-isoquinolinyl)iminomethyl]-4-[(4aR,10bR)-1,2,3,4,4a,10b-hexahydro-8,9-dimethoxy-6-phenanthridinyl]- (CA INDEX NAME)

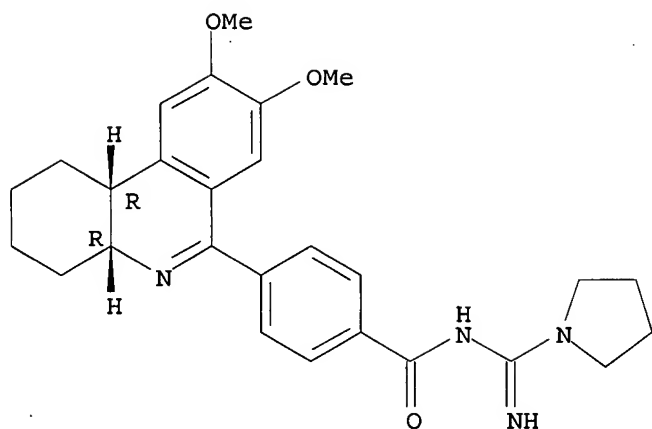
Absolute stereochemistry.



RN 667422-63-1 CAPLUS

CN Benzamide, 4-[(4aR,10bR)-1,2,3,4,4a,10b-hexahydro-8,9-dimethoxy-6-phenanthridinyl]-N-(imino-1-pyrrolidinylmethyl)- (CA INDEX NAME)

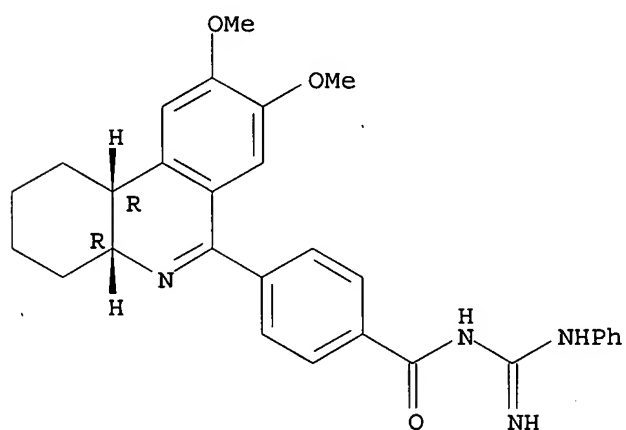
Absolute stereochemistry.



RN 667422-64-2 CAPLUS

CN Benzamide, 4-[(4aR,10bR)-1,2,3,4,4a,10b-hexahydro-8,9-dimethoxy-6-phenanthridinyl]-N-[imino(phenylamino)methyl]- (CA INDEX NAME)

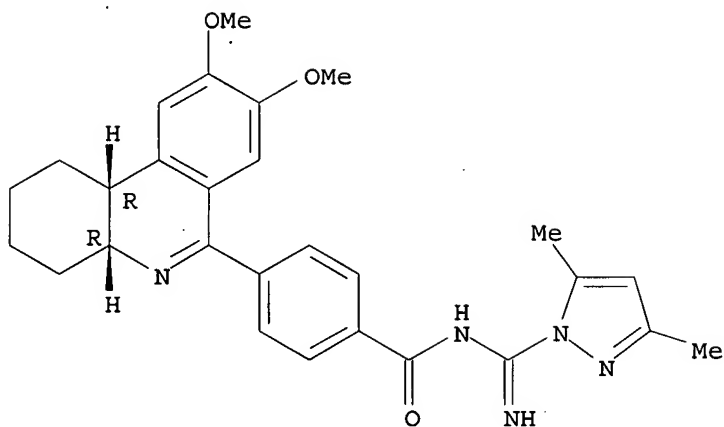
Absolute stereochemistry.



RN 667422-65-3 CAPLUS

CN Benzamide, N-[(3,5-dimethyl-1H-pyrazol-1-yl)iminomethyl]-4-[(4aR,10bR)-1,2,3,4,4a,10b-hexahydro-8,9-dimethoxy-6-phenanthridinyl]- (CA INDEX NAME)

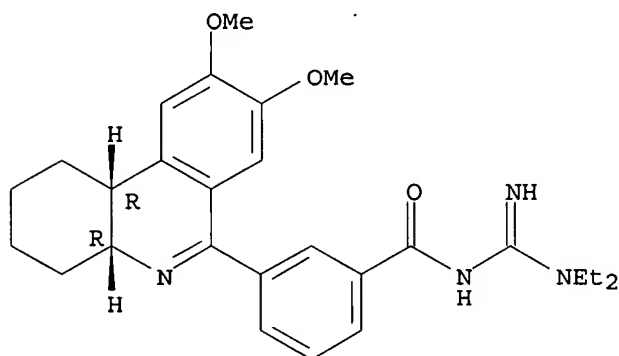
Absolute stereochemistry.



RN 667422-66-4 CAPLUS

CN Benzamide, N-[(diethylamino)iminomethyl]-3-[(4aR,10bR)-1,2,3,4,4a,10b-hexahydro-8,9-dimethoxy-6-phenanthridinyl]- (CA INDEX NAME)

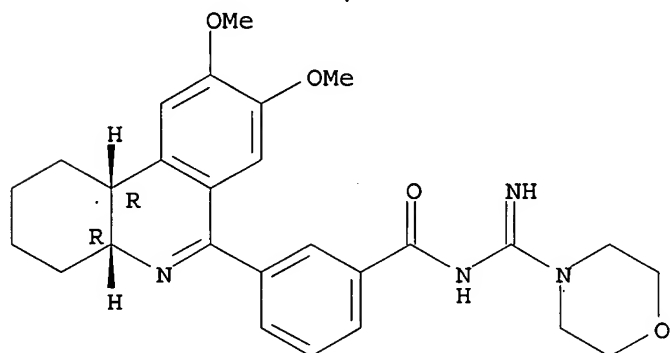
Absolute stereochemistry.



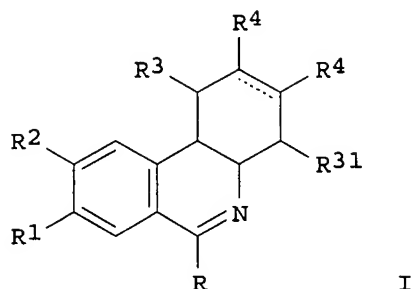
RN 667422-67-5 CAPLUS

CN Benzamide, 3-[(4aR,10bR)-1,2,3,4,4a,10b-hexahydro-8,9-dimethoxy-6-phenanthridinyl]-N-(imino-4-morpholinylmethyl)- (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2007 ACS on STN  
GI



AB Title compds. [I; R = C<sub>6</sub>H<sub>4</sub>R<sub>6</sub>; R<sub>1</sub>, R<sub>2</sub> = OH, (fluoro)alkoxy, cycloalkyl(meth)oxy; R<sub>1</sub>R<sub>2</sub> = OCH<sub>2</sub>O or OCH<sub>2</sub>CH<sub>2</sub>O; R<sub>3</sub>, R<sub>4</sub>, R<sub>31</sub> = H or alkyl; R<sub>3</sub>R<sub>31</sub> = alkylene; R<sub>6</sub> = CO<sub>2</sub>NR<sub>7</sub>R<sub>8</sub> or CONR<sub>9</sub>R<sub>10</sub>; R<sub>7</sub> = H, (cyclo)alkyl, (un)substituted Ph, etc.; R<sub>8</sub> = (cyclo)alkyl, (un)substituted Ph, etc.; R<sub>9</sub> = H or alkyl; R<sub>10</sub> = (un)substituted pyridyl or -Ph; dashed line = optional addnl. bond] were prepared. Thus, 3,4-(MeO)<sub>2</sub>C<sub>6</sub>H<sub>3</sub>CHO was condensed with MeNO<sub>2</sub> and the nitrostyrene product cyclocondensed with CH<sub>2</sub>:CHCH:CH<sub>2</sub> to give, in 4 addnl. steps, (-)-cis-2-(3,4-dimethoxyphenyl)cyclohexanamine which was N-acylated by 4-(MeO)C<sub>6</sub>H<sub>4</sub>NHCOC<sub>6</sub>H<sub>4</sub>(COCl)-3 to give (-)-cis-I [R = C<sub>6</sub>H<sub>4</sub>[CONHC<sub>6</sub>H<sub>4</sub>(OMe)-4]-3, R<sub>1</sub> = R<sub>2</sub> = OMe, R<sub>3</sub> = R<sub>4</sub> = R<sub>31</sub> = H] as the N-oxide (II). Data for biol. activity of II were given.

AN 2000:493521 CAPLUS

DN 133:120241

TI Preparation of phenanthridine N-oxides as PDE-IV inhibitors

IN Flockerzi, Dieter; Amschler, Hermann; Hatzelmann, Armin; Bundschuh, Daniela; Beume, Rolf; Boss, Hildegard; Kley, Hans-Peter; Gutterer, Beate

PA Byk Gulden Lomberg Chemische Fabrik G.m.b.H., Germany

SO PCT Int. Appl., 28 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

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PI	WO 2000042017	A1	20000720	WO 2000-EP150	20000112
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	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	CA 2359404	A1	20000720	EP 1999-100707	A 19990115
				CA 2000-2359404	20000112
				EP 1999-100707	A 19990115
				WO 2000-EP150	W 20000112
	AU 2000021077	A	20000801	AU 2000-21077	20000112
				EP 1999-100707	A 19990115
				WO 2000-EP150	W 20000112
	EP 1147087	A1	20011024	EP 2000-901089	20000112
	EP 1147087	B1	20050511		

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
IE, SI, LT, LV, FI, RO

			EP 1999-100707	A	19990115
			WO 2000-EP150	W	20000112
JP 2002534505	T	20021015	JP 2000-593585		20000112
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			WO 2000-EP150	W	20000112
AT 295352	T	20050515	AT 2000-901089		20000112
			EP 1999-100707	A	19990115
			WO 2000-EP150	W	20000112
PT 1147087	T	20050930	PT 2000-901089		20000112
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			WO 2000-EP150	W	20000112
ES 2242594	T3	20051116	ES 2000-901089		20000112
			EP 1999-100707	A	19990115
US 2002183350	A1	20021205	US 2001-889142		20010712
US 6538005	B2	20030325			
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			WO 2000-EP150	W	20000112

OS MARPAT 133:120241

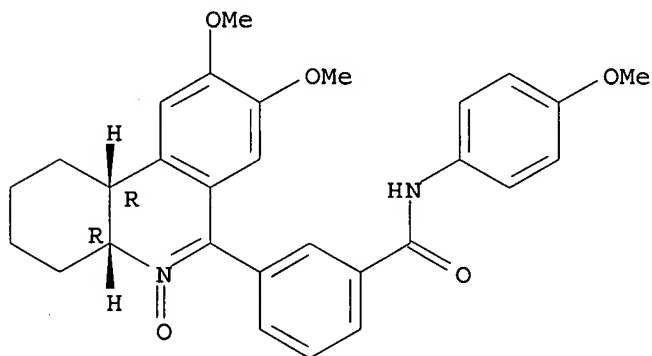
IT 284465-36-7P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(preparation of phenanthridine N-oxides as PDE-IV inhibitors)

RN 284465-36-7 CAPLUS

CN Benzamide, 3-[(4aR,10bR)-1,2,3,4,4a,10b-hexahydro-8,9-dimethoxy-5-oxido-6-phenanthridinyl]-N-(4-methoxyphenyl)-, rel-(-)- (CA INDEX NAME)

Rotation (-). Absolute stereochemistry unknown.



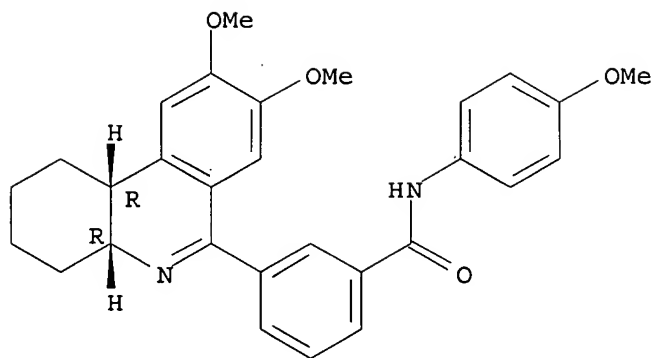
IT 284465-37-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation of phenanthridine N-oxides as PDE-IV inhibitors)

RN 284465-37-8 CAPLUS

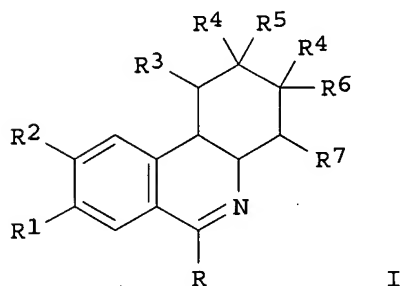
CN Benzamide, 3-[(4aR,10bR)-1,2,3,4,4a,10b-hexahydro-8,9-dimethoxy-6-phenanthridinyl]-N-(4-methoxyphenyl)-, rel-(-)- (CA INDEX NAME)

Rotation (-). Absolute stereochemistry unknown.



RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2007 ACS on STN  
GI



AB Title compds. [I; R = ZSO<sub>2</sub>NR'R<sub>8</sub> or ZCONR<sub>9</sub>R<sub>10</sub>; R<sub>1</sub>,R<sub>2</sub> = OH, (fluoro)alkoxy, cycloalkyl(meth)oxy; R<sub>1</sub>R<sub>2</sub> = alkylendioxy; R<sub>3</sub>,R<sub>4</sub>,R<sub>7</sub> = H or alkyl; R<sub>5</sub>,R<sub>6</sub> = H; R<sub>5</sub>R<sub>6</sub> = bond; R',R<sub>8</sub> = H, alkyl, cycloalkyl(methyl), (un)substituted Ph; R<sub>9</sub> = H or alkyl; R<sub>10</sub> = (un)substituted Ph or -pyridyl; Z = phenylene] were prepared. Thus, cis-2-(3-ethoxy-4-methoxyphenyl)cyclohexylamine (preparation given) was amidated by 4-(H<sub>2</sub>NO<sub>2</sub>S)C<sub>6</sub>H<sub>4</sub>COCl to give, after cyclization, I [R = C<sub>6</sub>H<sub>4</sub>(SO<sub>2</sub>NH<sub>2</sub>)-4, R<sub>1</sub> = OMe, R<sub>2</sub> = OEt, R<sub>3</sub>-R<sub>7</sub> = H]. Data for biol. activity of the prepared I were given.

AN 1999:96219 CAPLUS

DN 130:153582

TI Preparation of hexahydrophenanthridine-6-ylbenzenesulfonamides and analogs as phosphodiesterase 4 inhibitors

IN Amschler, Hermann; Flockerzi, Dieter; Ulrich, Wolf-Rudiger; Bar, Thomas; Martin, Thomas; Schudt, Christian; Hatzelmann, Armin; Beume, Rolf; Hafner, Dietrich; Boss, Hildegard; Kley, Hans-peter; Gutterer, Beate

PA Byk Gulden Lomberg Chemische Fabrik G.m.b.H., Germany

SO PCT Int. Appl., 37 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

PATENT NO.

KIND DATE

APPLICATION NO.

DATE



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PI  WO 9905113          A1      19990204      WO 1998-EP4478          19980718
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      ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
    RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,
      PT, SE

    CA 2297911          A1      19990204      CA 1998-2297911        19980718
    CA 2297911          C      20070904

    AU 9891546          A      19990216      AU 1998-91546          19980718
    AU 756349          B2      20030109

    EP 1000035          A1      20000517      EP 1997-112793        A      19970725
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      IE, SI, LT, LV, FI, RO
    EP 1998-943742          19980718

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    EE 4189             B1      20031215      WO 1998-EP4478        W      19980718
    EE 2000-32          19980718

    HU 2000003311       A2      20010328      EP 1997-112793        A      19970725
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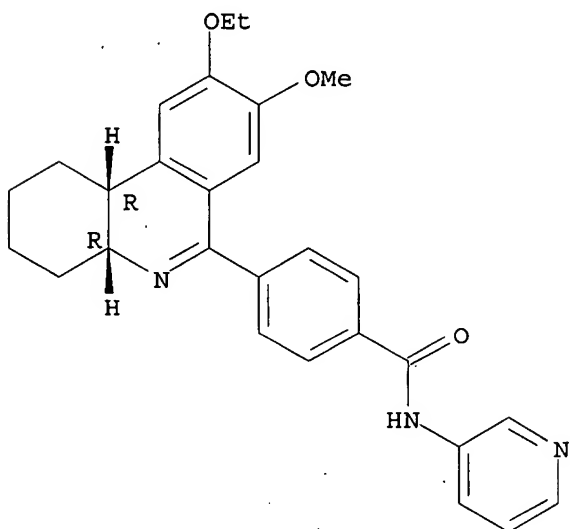
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    AT 228507           T      20021215      AT 1998-943742          19980718
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    ES 2189235          T3      20030701      ES 1998-943742          19980718
    EP 1997-112793        A      19970725
    IL 133825           A      20051218      IL 1998-133825          19980718
    EP 1997-112793        A      19970725
    WO 1998-EP4478        W      19980718
    CZ 296064           B6      20060111      CZ 2000-281            19980718
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    PL 191094           B1      20060331      PL 1998-338452          19980718
    EP 1997-112793        A      19970725
    WO 1998-EP4478        W      19980718
    US 6121279          A      20000919      US 2000-462508          20000124
    EP 1997-112793        A      19970725
    WO 1998-EP4478        W      19980718

OS  MARPAT 130:153582
IT  220167-05-5P 220167-09-9P
    RL: BAC (Biological activity or effector, except adverse); BSU (Biological
      study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use);
      BIOL (Biological study); PREP (Preparation); USES (Uses)
      (preparation of hexahydrophenanthridine-6-ylbenzenesulfonamides and analogs
      as phosphodiesterase 4 inhibitors)
RN  220167-05-5  CAPLUS

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CN Benzamide, 4-[(4aR,10bR)-9-ethoxy-1,2,3,4,4a,10b-hexahydro-8-methoxy-6-phenanthridinyl]-N-3-pyridinyl-, rel- (CA INDEX NAME)

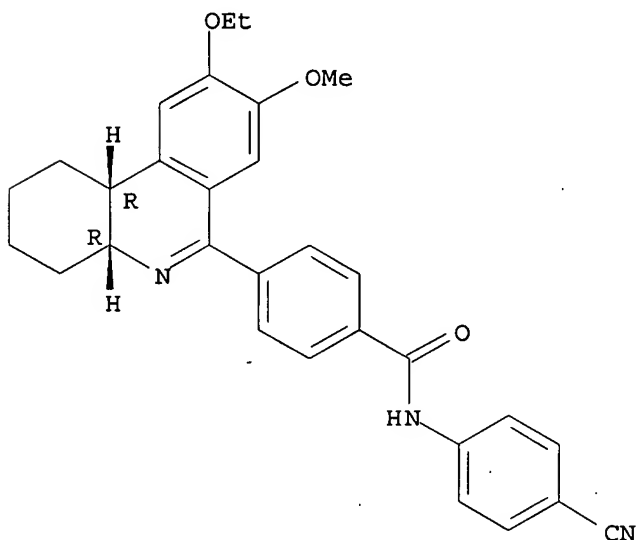
Relative stereochemistry.



RN 220167-09-9 CAPLUS

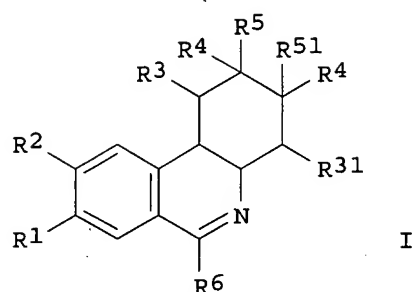
CN Benzamide, N-(4-cyanophenyl)-4-[(4aR,10bR)-9-ethoxy-1,2,3,4,4a,10b-hexahydro-8-methoxy-6-phenanthridinyl]-, rel- (CA INDEX NAME)

Relative stereochemistry.



RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2007 ACS on STN  
GI



AB Title compds. [I; R1, R2 = OH, alkoxy, cycloalkoxy, cycloalkylmethoxy, fluoroalkoxy; R1R2 = alkylenedioxy; R3, R31 = H, alkyl; R3R31 = alkylene; R4 = H, alkyl; R5, R51 = H; R5R51 = bond; R6 = (modified) carboxyphenyl], were prepared for treatment of airway diseases. Thus, cis-N-[2-(3,4-dimethoxyphenyl)cyclohexyl]-4-methoxycarbonylbenzamide (preparation given) was stirred 8 h at 50° with POCl3 in MeCN to give 38.6% .  
cis-8,9-dimethoxy-6-[4-(methoxycarbonyl)phenyl]-1,2,3,4,4a,10b-hexahydrophenanthridine. The latter inhibited phosphodiesterase IV with -log IC50 = 7.39.

AN 1997:533622 CAPLUS

DN 127:205483

TI Preparation of carboxyphenylhexahydrophenanthridines as phosphodiesterase IV inhibitors.

IN Amschler, Hermann; Flockerzi, Dieter; Ulrich, Wolf-Rudiger; Bar, Thomas; Martin, Thomas; Schudt, Christian; Hatzelmann, Armin; Beume, Rolf; Hafner, Dietrich; Boss, Hildegard; Kley, Hans-Peter; Goebel, Karl-Josef; Gutterer, Beate

PA BYK Gulden Lomberg Chemische Fabrik G.m.b.H., Germany; Gutterer, Beate

SO PCT Int. Appl., 38 pp.

CODEN: PIXXD2

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9728131	A1	19970807	WO 1997-EP402	19970130
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	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
				DE 1996-19603321	A 19960131
				EP 1996-101791	A 19960208
	DE 19603321	A1	19970807	DE 1996-19603321	19960131
	CA 2245142	A1	19970807	CA 1997-2245142	19970130
	CA 2245142	C	20041130		
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				EP 1996-101791	A 19960208
				WO 1997-EP402	W 19970130
	AU 9717199	A	19970822	AU 1997-17199	19970130
	AU 707058	B2	19990701		
				DE 1996-19603321	A 19960131
				EP 1996-101791	A 19960208
				WO 1997-EP402	W 19970130
	EP 882021	A1	19981209	EP 1997-904354	19970130
	EP 882021	B1	20030305		

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IE, SI, LT, LV, FI, RO

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			EP 1996-101791	A	19960208
			WO 1997-EP402	W	19970130
CN 1214681	A	19990421	CN 1997-193458		19970130
			DE 1996-19603321	A	19960131
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			WO 1997-EP402	W	19970130
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			EP 1996-101791	A	19960208
PL 187127	B1	20040531	PL 1997-328019		19970130
			DE 1996-19603321	A	19960131
			WO 1997-EP402	W	19970130
NO 9803505	A	19980911	NO 1998-3505		19980730
NO 311214	B1	20011029			
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US 6191138	B1	20010220	US 1998-117507		19980731
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			WO 1997-EP402	W	19970130

OS CASREACT 127:205483; MARPAT 127:205483  
IT 194735-32-5P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of carboxyphenylhexahydrophenanthridines as phosphodiesterase IV inhibitors)

RN 194735-32-5 CAPLUS

CN Benzamide, 4-(1,2,3,4,4a,10b-hexahydro-8,9-dimethoxy-6-phenanthridinyl)-N-methyl-, cis- (9CI) (CA INDEX NAME).

Relative stereochemistry.

